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CLINICAL OBSERVATIONS ON THE EMPLOYMENT OF ANTI-PYRIN IN TYPHOID FEVER. DR. M. MANNHEIMER, *of Chicago, Physician to Michael Reese and Alexian Brothers' Hospitals, Chicago.*

Encouraged by accounts which have appeared in European journals, relative to the usefulness of antipyrin when exhibited in typhoid fever, I lately introduced the remedy in the practice of the Alexian Brothers' and the Michael Reese Hospitals in this city.

With the assistance of Doctors Clevenger, Hoelcher, Frankenthal and Collins, 175 cases of typhoid fever were treated in these institutions during the year 1885, the resulting death rate being 1.71 per cent.

One hundred and thirty-nine of these patients were cared for at the Alexian Hospital, of whom three died; and thirty-six patients entered and were discharged convalescent from the Michael Reese Hospital, with no fatal result. The mortality was thus 2.15 per cent. for the hospital first named; and 1.71 per cent. for both institutions. One death

was due to exhaustion and two to perforation of intestines. No discrimination was made as to the physical character or class of the patients, nor as to the severity of the disease. Ninety-eight per cent. were characteristically prostrated by the malady, while but one was of the ambulatory type. The majority, in consequence of previous unfavorable surroundings, habits, or dyscrasiae, had less than the average recuperative power.

Males preponderated, as only such are taken at the Alexian Hospital. It thus happens that one hundred and sixty were men, and only fifteen were women. The ages ranged from 14 to 50 years, the average being 25 years.

Prodromata in cases of this character are usually impossible to ascertain. The utter ignorance which is so often responsible for this malady and the carelessness which it involves renders patients and friends alike poor observers of the symptoms of the disorder. Questioning seldom elicits anything satisfactory concerning the occurrence of epistaxis or even headache before an arrival at hospital; and reliance is only to be placed upon observations made after the admission of patients. Hence the phenomena of the initial stage may be disregarded, as statements made upon this head are untrustworthy.

Nor is it always practicable to ascertain the subjective conditions of the patients when stupor is a complication of their trouble. As near as could be determined abdominal tenderness was present in 15 cases; moderate tympanites in 29; tenderness with or without gurgling in right iliac region in 78; and troublesome sordes in 19. Epistaxis occurred in 40; vomiting in 14; diarrhoea in 95; constipation in 34; the remainder being irregular as to bowel movement.

The tongue coating varied as it usually does in the disorder, the frequent application of a mouth wash largely preventing the typical dryness and morbid accumulations upon the mucous surfaces. The maximum temperature in the cases that proceeded to convalescence was 105.5°; the minimum sub-normal being 96.5°; average stay in hospital thirty days.

In nine out of eleven relapses, the cause was directly traceable to disregard of the physician's orders concerning food or exercise. Usually indiscreet friends endanger the lives of the patients by smuggling indigestible edibles into the wards.

Careful notes were not made as to the typhoid eruption, but it was noticeable only in a very few cases. Splenic enlargement was frequent but variable.

The complications induced by the fever were as follows: complete aphonia 1; lobar pneumonia 3; lobular pneumonia 1; pleurisy 1; bronchitis, light cases, 3; vesical tenesmus 3; peritonitis 2; cervico-brachial neuralgia 1; hæmoptysis 1; hæmaturia 1; intercostal neuralgia 1; intestinal hæmorrhage 1; gastralgia 1; bed-sores 3.

The accompaniments of the typhoid fever were in some cases, intermittent fever 6, intermittent fever during convalescence 1, plumbism 2, arthritis 1, frontal head-injury 1, occipital head injury 2, hemicrania 1, alveolar abscess 1, acute conjunctivitis 1, spinal congestion 1, abscess of body 3, of larynx 1, of thigh 1, inguinal region 2.

The sequelæ were phlebitis 4, otitis media 2, tibial periostitis 1, parotiditis 2, suppurative phlebitis 1, suppurative periostitis of tibia 1, hemiplegia 1.

Delirium was marked in twenty cases; restlessness in

about one-third; while profound stupor occurred in but one. The mental disquietude bore no relation whatever to the pyrexia.

Antipyrin was used in place of the older methods of temperature, such as the cold-pack, salicylates and quinine. This newly-discovered and valuable agent was resorted to usually when a persistent rise toward 103° was noted, or when the discomfort of the heat, the exhaustion it induced, or other indication justified its exhibition. Copious diaphoresis usually followed its administration, and in several cases the eruption peculiar to the medicine followed. This eruption was noticed as occurring more often in those whose skin was softened and tender from in-door life. Laborers did not suffer in this way as much. In two cases this skin trouble began at the groin, extending upward over the abdomen and chest. As a rule the chest and arms were the locations of the outbreak. The dose usually given was fifteen grains, smaller doses of twelve and ten grains, at intervals of two hours or thereabouts, being given if necessary. The first dose, as a rule, was all that was needed to lower the temperature from two to four degrees, three degrees being an average.

A tolerance of the drug when ingested was associated with a greater reduction in temperature from the same dose. In one case the sweating was so exhausting as to prevent the further use of antipyrin, but the diaphoresis induced varies within wide limits and such idiosyncrasy should be regarded where it exists.

It is, of course, an undetermined matter as to just what dangers attend high temperature *per se*. It is not to be expected that it is the only element needing control in the patient's

behalf, but, so far as demonstrated by experimentation, the suppression of the pyrexia largely benefits the progress of the disorder. Antipyrin has, moreover, none of the disadvantages of the antipyretics formerly used. It is not irritating as are the salicylates ; it does not congest the brain as does quinine, nor has the fatal supervention of exhaustion been recorded against it as against the injudicious use of the cold-pack or bath. It would be well, however, to observe the condition of the thoracic viscera, as any depressant may induce collapse. Beaumetz and others call attention to the styptic properties of antipyrin; and the claim is made that intestinal haemorrhage is controlled more quickly through its use than by any other means. Stimulants are antidotes to the undue effects of the drug.

The frequency of the pulse was reduced while its force was not affected when antipyrin was given therapeutically, and the diarrhoea was noticeably checked. Cephalalgia observed in the course of high temperature, was also relieved.

The medicine exerts no permanent effect upon the temperature range, for the afternoon rise will occur the next day after treatment just as though nothing had been given, but this does not lessen its value in enabling us to control immediate conditions.

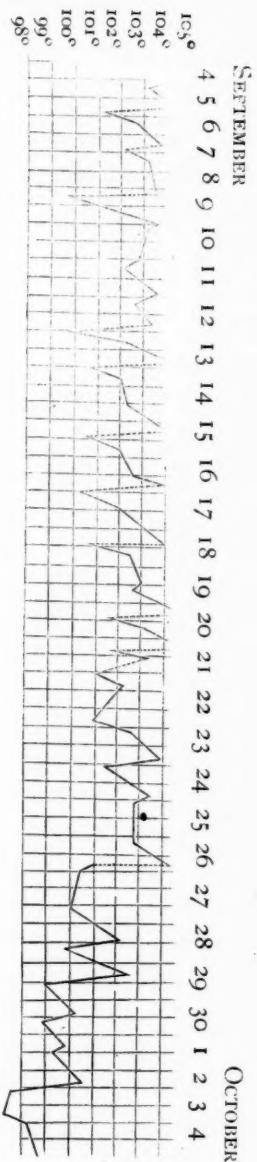
Quinine was given only in tonic doses and usually during convalescence. Stimulants were used to bridge over the period of waning strength of the patient. One case was brought to the Alexian Hospital in the fifth week of typhoid fever, and the patient was found to be suffering from profound cinchonism. As many as 30 grains of quinine had been persistently taken. Discontinuance of the quinine was all that was needed to restore him to health.

The temperature record of a female patient three days after entering the Michael Reese Hospital was as follows:

8.30 A. M.	103°	15 grains antipyrin.
9.30 A. M.	102.5°	10 " "
10.30 A. M.	101°	10 " "
11.30 A. M.	100°	
5.00 P. M.	103°	15 grains antipyrin.
6.00 P. M.	101.4°	10 " "
7.00 P. M.	99.2°	

In only one instance was the medicine rejected by the stomach.

A chart is herewith given of the daily range of temperature in a male case at the Alexian Hospital, the dotted lines indicating the reduction of temperature induced when the new remedy was used.



OPIUM-SMOKING IN CHICAGO. *By CHAS. WARRINGTON
EARLE, M. D., Physician to the Washingtonian Home.*

[Read before the Chicago Medical Society, January 4th, 1886.]

The vices of the old world rapidly find their way to our shores, and along with alcoholic excesses, and opium-eating, and the cocaine habit, we find ourselves confronted by a new and, in some respects, a more fascinating vice, opium-smoking.

The narcotic properties of the juice of the poppy were known two or three centuries before the commencement of the Christian era. I am, however, without the proper data as to the time when crude opium, morphine, codeia, etc., etc., were first separated from it.

The practice of eating and smoking opium probably was introduced into China from Arabia. From China it was brought to California, and what we know of the bad effects of the drug has come from our western shores. Until the year 1868, opium-eating and opium-smoking were practiced and indulged in only by the Chinese. The first white man, a sporting character, smoked opium in California (1868). This, then, is the starting point in this country.

I find in looking over the reports, and particularly an article entitled "Number of Opium-smokers in China," from the *North China Daily News*, that it is estimated that about two millions of Chinese are opium-smokers, and although this evil is apparently so general, there is also a deep feeling among this numerous people that its use is doing a widespread and irreparable injury to their country. These people have come to this country bringing the habit with them, and in their own apartments and in sections of cities set apart for their habita-

tion, they carry on the vice, as they learned it and practiced it in their native land. Two millions of inhabitants of a country indulging in a habit of this kind seems terrible. It is terrible, but not to the extent which the figures indicate, for it is only two-thirds of one per cent. of the inhabitants—as the estimate of the population is 400,000,000.

A certain number of young men in our own country, Americans, with nothing to do, prostitutes, and young men and girls willing to try some experiment to make life somewhat more fascinating; or that class of people who appear to have no aim in life except to gratify some abnormal appetite, have come to learn and practice this habit.

My experience is with young men all Americans, I think, and all with capabilities which, if exerted in the right direction, would have enabled them to occupy a fine and, in one or two cases, more than an average position among their associates. They lacked early discipline, however, and contracted this with two or three other pernicious habits.

It was soon noticed by the authorities in California that the practice was extending, and efforts have been made to prohibit by law the spread of this vice. In California a law exists making every person who opens an establishment where opium-smoking may be carried on, or who resorts to these places, punishable either by fine or imprisonment. In Nevada, also, laws have been passed making this vice punishable by sentence to the penitentiary; and it is believed by the authorities that the evil habit has been in a very great degree checked by these very stringent laws. In our own city, during the last three or four years, the police have made various efforts to break up certain smoking dens, and have been in a very great degree successful. I am not prepared to say that much of this smoking is not now carried on in private apart-

ments. The Chinese smoking-dens have been almost entirely destroyed.

A smoker's outfit, which I now show you, is somewhat expensive, and the practice itself is one which costs a considerable amount of money. The pipe is from 16 to 24 inches in length, and consists of a bowl and stem. In addition there is a large tray, upon which is placed a lamp, several peculiar shaped knives and scissors for the cleansing of the pipe, and for the trimming of the lamp; a long needle, and a peculiar shaped box or can in which the opium is placed. The place where the opium-smoking is usually carried on is called an "opium-joint," and in this city we very frequently find the front part of one of these "joints" occupied as a cigar store or a laundry, the "joint" being well towards the rear of the establishment. If one is well fitted up there are several bunks or low tables, upon which are placed certain kinds of matting. One of my informants has seen eighteen people, male and female, smoking in one of these dens at one time.

As I remarked above, a place where opium-smoking is carried on is called an "opium-joint." One who is thoroughly under the influence and *must* smoke frequently is called a "fiend." The act of smoking with all its preparations is termed, "hitting the pipe."

The first "opium-joint" I ever visited was upon State street. A young woman had become addicted to this habit; and a gentleman, somewhat interested in her, appealed to me to visit her and if possible prevail upon her to place herself under restraint. I found the patient in one of those low wooden buildings on South State, near 16th street. A small cigar store occupied the front of the building, the second room being filled with gaudily dressed girls, more particularly of French descent, while back of this was a fairly furnished par-

lor, into which I was ushered. In the course of my conversation with this young woman and the gentleman who was interested in her, I requested to see the outfit for smoking, and if not particularly objectionable, to see them smoke. They very readily acquiesced, and repaired at once to an inner room, and went through the entire process of cooking and smoking opium. A low bed, rather luxuriously furnished, occupied one side of the room, upon which the gentleman placed the tray containing the outfit. Reclining on the couch, one on either side of the tray, they proceeded to cook and smoke the opium. My efforts at reforming this woman were not at all successful, and she declined placing herself under the treatment which I suggested. She died some months after in Cook County Hospital. My attention has, more particularly, been called to this vice by the following histories of men, who have become inmates of the Washingtonian Home during the last two years. Their ages, nationalities, occupations, etc., are briefly given.

No. 1. Age, 38; born in Tennessee, gambler by occupation, smoked for the relief of neuralgia since 1880. Was admitted on pretence of desiring to reform from alcoholic excesses, but in a few days confessed that he was an opium-smoker, and was placed under the usual treatment. In five days he was perfectly free from his opium-habit, and sent to the other side of the Home.

No. 2. Age, 28; born in Louisiana, bar-tender, commenced smoking in 1880. Was in the hospital six days when he was sent to the reformatory side of the house. He was discharged some days after for violating the rules of the institution, and is now tending bar and probably smoking.*

No. 3. Age, 27; born in New York, son of a wealthy man and with nothing to do; smoked since 1880. While under

treatment did excellently well, and was sent to the reformatory with every prospect of a perfect reformation. He is known now to frequent a saloon whose attachés are opium-smokers, and presumably he is smoking.

No. 4. Age, 25; born in New York, telegraph operator; smoked opium since 1881. Several days after admission he was discharged from the institution for bringing whisky into the house.

No. 5. Age, 28; born in Pennsylvania, clerk; commenced the habit in San Francisco in 1878. Did well for several days, but finally was discharged on account of drinking.

No. 6. Age 26; American, telegraph operator; married. Up to seven years ago he was addicted to no habit. At that time he met with an accident, for which his physician prescribed morphine. During the year after his discharge by the physician he took the drug until he was using five grains daily. Six years ago he began smoking opium as a substitute for the morphine habit. He is now under treatment and seems determined to make a success. His wife, from constant attendance upon him and from assisting him in preparing his pipe, has become an *habitué*.

OPIUM-SMOKERS IN CHICAGO.

The exaggerated statements made by some of the victims in regard to the number of those practicing this habit, should be taken with the greatest possible allowance. Several years ago I made a very careful investigation in regard to the number of *opium-eaters* in this city, and 2,000 would be an outside number, and yet, within a short time, I have seen a statement in the public prints, telegraphed from New York, that over 25,000, including a large number of the better class of our people, fashionable ladies and the like, were using this drug.

There are no facts which warrant such statements. In regard to those smoking opium the number is very much less. One of my informants, who is well acquainted with all of the smoking-dens, and with a great part of those addicted to the habit, believes that 60 will cover all who are known to be opium-smokers in this city, and I have never had an estimate of over 200 made by those who are in the habit of exaggerating to the utmost. We must always take with great allowance any estimate made by the *habitué*, for inasmuch as he uses the drug himself he is convinced that everybody must also use it. This peculiarity is true of many drunkards. Concerning the class of people who smoke opium, we find that they belong to that crowd of people who are easily tempted, with very little to do, usually associated with some saloon-interest, prostitutes, and occasionally one who has failed in every kind of business, and seeks oblivion by the use of the pipe. We have not been able to find that any of the respectable class of females are in the habit of using the pipe, and the stories that wealthy ladies are driven to these dens in their carriages and seek solace and become fascinated by the use of this drug are absolutely false. I know of but two ladies who use the pipe. Coming now to speak of the symptoms produced by smoking this drug, we find that they may be fairly divided into two classes: Symptoms experienced by the new beginner of an exhilarating and fascinating character. 2d, The symptoms experienced by the "opium-fiend," or one addicted to the use of it in quantities, and who takes it for the obtunding of all his sensibilities. Concerning the effects of the first, I will quote from a writing of a physician, who in order to be a better judge of the effects of the drug, had every facility for smoking opium erected in his own office,—a most dangerous experiment it seems to me. He says: "The first effect was nausea and dizziness, accom-

panied by a pleasant sense of exhilaration, and followed by a quiet easy contentment. After a time there was an increase in the force and frequency of the pulse, giddiness, with slight nausea, and some staggering on attempting to rise or walk. There was a feeling of uncertainty in putting down the feet in walking, dazing of the mind, sleepiness, and heaviness of the eyelids. There seemed to be some trouble with the ears, and he commenced talking very loud." At first the pulse, temperature, and respiration are slightly increased, but after the drug has been smoked some time, they are lessened. During the commencing stage every one is quite certain he can give up the use of the drug at any time, but as time goes on he finds himself completely under its influence, enslaved to a demon whose power he cannot possibly resist. The quantity used as compared with a given quantity of pulvis opii, or morphia I am not able to ascertain. It is a kind of watery extract and looks something like a thick black molasses. Its effects are very similar, though less intense, to taking morphine by the mouth, and, after a very careful consideration of the subject, I have come to the conclusion that smoking opium produces less injury to the system than taking it by mouth. The cure for opium-smoking is much easier, and the patient experiences much less pain than when recovering from its use when taken by mouth or hypodermically. Opium-smokers do not have that haggard, pale look that we almost always find in opium-eaters. A man may smoke opium in a moderate degree for years, and not injure his physical condition; but mentally and morally it produces the most terrible results. He becomes melancholy and sees things in a way that casts a gloom over all his prospects. He becomes indifferent to business, careless in regard to all the responsibilities of life, and above all there is a tendency to prevaricate and

falsify, sometimes when there is absolutely no reason for so doing. Respiration and circulation, as I have already stated, are slightly increased during the first stage, but lessened when the person becomes thoroughly under the influence of the drug. There appears to be, when the *habitué* becomes entirely under the influence of the drug, a lessening in regard to the sexual appetite, but seminal emissions are frequent. During the interval of smoking or during the slight period of exhilaration, the sexual appetite is increased, and taking knowledge of this fact, it is claimed that a certain number of girls have been ruined by those knowing the peculiar desires and inclinations when partially under the influence of the drug. The use of the drug by smoking produces constipation and haemorrhoids, the same as we find when taken by the mouth, or hypodermically, although all the symptoms are less intense. Upon its withdrawal we find sneezing, running at the eyes, dizziness, noises in the head, diarrhoea, muscular pains and insomnia present in a large number of cases. There is, however, but little suffering experienced by one recovering from this vice, compared with the sufferings endured by one who has been an opium-eater. Little medication is needed, but these persons must be under restraint, and must be under the control of one who is firm, and who under no circumstances will believe what they say. A few days in a room well warmed, that has all the conveniences of bathing, with cocoa, and avena sativa—nerve sedatives—and tonics, with a fluid diet, will bring a person to where he can commence to build up his mental and moral status. He is now in a condition in which he may commence to reform if he so desires. I have never yet met with a case which I can

say was cured, or with a case that I believed was hopeless, or one who, I believed, could not reform from opium-smoking if he desired. These people will not accept the conditions necessary for a cure. The great trouble is that they are so oblivious to all the responsibilities of life, and so willing to become wrapped up with the exhilarating effect of this drug, avoiding all the troubles, pains, and responsibilities of life, that they cannot be brought to see that it is a duty both to themselves and to their friends to stop the habit. In addition we find a certain class of people who are willing to coddle, and treat these men and women for a disease; are willing to excuse them for the terrible train of symptoms which they have brought upon themselves, and which they insist upon retaining. In this way we are thwarted from bringing about good results, which might be produced.

REPORT OF A CASE OF HYDATIFORM PREGNANCY.

By E. J. DOERING, M. D.

[Read before the Chicago Gynaecological Society, Jan. 15th, 1886.]

Hydatiform pregnancy, or more correctly designated cystic degeneration of the villi of the chorion, is of such rare occurrence and possesses so much clinical interest, that a report of a case of the kind which recently occurred in my practice, will, I am confident, be of interest to the Fellows of this Society.

The etiology of this affection is still unsettled. Virchow attributed it to a morbid condition of the decidua; others to a morbid maternal condition, while Hewitt believes it follows the death of the foetus, from what-

ever cause, the chorion remaining attached to the decidua, and stimulated by the "energy of growth" developing into a vesicular mole. This latter view has some foundation in the fact, that as a rule no trace of the foetus can be discovered.

"The degeneration of the villi of the chorion generally commences at an early period of pregnancy, before the placenta has commenced to form. The epithelium of the villi appears to be the part first affected, and the whole interior of the diseased villi becomes filled with cells. The connective-tissue of the villus undergoes a remarkable proliferation, and collects in masses at individual spots, the remainder of the villus being unaffected. By the growth of these elements the villus becomes distended and many of the cells liquefy, the intercellular fluid, thus produced, widely separating the connective-tissue, so as to form a network in the interior of the villus. Thus are formed the peculiar grape-like bodies which characterize the disease. When once the degeneration has commenced, the diseased tissue has a remarkable power of increase, so that it sometimes forms a mass as large as a child's head, and several pounds in weight."—(*Playfair's Midwifery.*)

The attachments of the vesicular mole to the uterus vary. Schroeder reports a case in which the vesicles penetrated throughout the uterine wall to the peritoneum, and Dr. Tyler Smith saw a similar condition, which led to a rupture of the uterus during the expulsive pains. By reason of the rapidity of the growth and the great distension of the uterus, expulsion of the mass generally occurs between the fourth and sixth months. The mass is usually expelled piece-meal, accompanied by profuse and exhausting haemor-

rhages, thus exposing the patient to all the dangers of septicaemia and rendering the prognosis in any case doubtful.

The symptoms of a hydatiform pregnancy, such as rapid increase in the size of the uterus, a doughy sensation to the touch, general malaise, etc., are all uncertain and misleading, and practically it is impossible to make a correct diagnosis until portions of the vesicles are expelled, as in the following case:

Mrs. W. D. P., a cultured lady, of slender physique, 21 years of age, was attended by me in labor fifteen months ago, and delivered by instruments of a healthy boy weighing ten pounds. Her general health has been good. She has had no miscarriages either previous to or since the birth of her child. Her last period occurred during the latter part of October, 1885. During the month of November the catamenia remained absent, which she attributed to a cold, the idea of pregnancy not occurring to her, as she had none of the usual symptoms. During the month of December, and particularly during the week preceding the holidays, she was on her feet constantly, although not feeling well, having sensations of chilliness, followed by a feeling of heat and general depression. On the Sunday before Christmas a slight and painless flow of blood commenced, believed by her to be the period, now four weeks overdue. The flow continued several hours and then ceased. On Christmas day, while seated at the dinner-table, she was suddenly attacked with a profuse haemorrhage, the blood saturating the floor, and continuing until a degree of faintness was produced, in which condition I found her on my arrival a few minutes afterwards. The haemorrhage, which had been entirely without pain, ceased suddenly. A careful examina-

tion confirmed my suspicion of pregnancy, although I was much surprised at the size of the uterus, corresponding to a four and one-half months' pregnancy, the fundus rising nearly midway between the symphysis pubis and the umbilicus. There being no further haemorrhage, no pain and no dilatation of the os, an expectant plan of treatment was pursued by instructing the patient to keep in bed, enjoining absolute rest, and giving her a few doses of morphia. On the following night another haemorrhage occurred, but of not much consequence, and requiring no interference. Two days later, on the morning of the 28th of December, another haemorrhage took place, more copious than the last one, but still unaccompanied with pain. An examination showed slight dilatation of the os, but not sufficient to permit the recognition of the contents of the uterus. As the patient was beginning to show decided symptoms of anæmia, the vagina was tamponed and ergot administered to check the haemorrhage and favor uterine contractions.

Uterine pains soon commenced, accompanied by considerable haemorrhage; the os dilated fully one inch, the presenting part giving the sensation to the finger of a blood-clot. This was soon expelled in detached portions, and on removal from the vagina was readily recognized as a hydatiform mole, having all the characteristic appearances of a grape bunch, composed of a mass of translucent vesicles, about the size of currants, containing a clear limpid fluid. After inserting two fingers into the uterus and emptying it as thoroughly as possible of all the diseased tissue, the haemorrhage promptly stopped. The entire mass removed equalled about the size of a large orange. Some febrile reaction occurred, but for several days the temperature did

not exceed $100\frac{1}{2}^{\circ}$ and the pulse 95, the treatment consisting of quinine and ergot, internally, and the use of uterine and vaginal injections of carbolized water.

On the beginning of the fourth day the patient was suddenly seized with a severe chill, followed by the usual symptoms of septic poisoning, high temperature ($104\frac{1}{2}^{\circ}$), rapid and feeble pulse, superficial respiration, great tympanites, thirst, vomiting, and arrested lochia, with no pain or tenderness over the abdomen. The outlook was anything but promising, but the prompt administration of large doses of quinine, combined with diaphoretics, turpentine stupes, warm fomentations, and the continued use of antiseptic injections was followed by the most gratifying results, and, after four days of great anxiety, the patient had recovered sufficiently to be declared out of danger. At the present time, eighteen days since the expulsion of the mole, the patient is up and about the house, with a good appetite and making preparations to leave in a week or two on a journey to the south.

2406 Prairie Avenue.

ON THE AFFECTIONS OF THE SKIN INDUCED BY TEMPERATURE VARIATIONS IN COLD WEATHER. (Second Paper.) *By JAMES NEVINS HYDE, M. D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago.*

In the early part of last year* I had the opportunity of writing and publishing a paper on the general subject suggested by the title given above. It is here purposed to supplement that former communication, by touching upon certain points con-

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nected with the same theme, that were then omitted chiefly in consequence of lack of space.

For those who are not familiar with the field then surveyed it may be well to note that the subject was introduced by reference to the great prevalence, in the region known as the Northwest, of a class of cutaneous disorders accompanied by pruritus in various grades, and occurring under the influence of temperature-variations in cold weather. It was shown that, while it was comparatively easy to persuade the victims of these disorders as to the actual cause of their trouble when only exposed portions of the body were affected, as for example, in the case of frostbitten hands and feet, it was on the contrary found to be difficult and almost impossible to compass the same end when the climatic influences were exerted upon those portions of the body covered by the clothing.

It was also pointed out that these climatic influences resulted in the production upon the skin of different individuals, of different symptom pictures; one large class of sufferers experiencing only a cutaneous pruritus (the "pruritus hiemalis", of Duhring; "winter prurigo", of Hutchinson) the sole eruption occurring as the result of the traumatisms of scratchin'; and the characteristics of such pruritic skins whether free from eruption or wounded by traumatism were fully enumerated. The several forms of erythema, eczema, urticaria, and furunculosis, resulting from the same causes, namely, sudden temperature-variations, were also described.

It was further stated that most of those holding erroneous opinions respecting the nature of these disorders, could be divided into two classes, viz., first, those entertaining the view that these disorders were parasitic in character; second, those believing that they were due to certain morbid conditions of the system, best recognized under the popular phrase "impu-

rities of the blood." The arguments against both of these conclusions were somewhat fully set forth, the first doctrine being tested by a detailed account of the several points of resemblance and difference between the winter disorders of the skin and scabies, or "the itch."

Attention was directed also to the fact that the acarius scabiei, though requiring an objective of low power for display of its anatomical features, is visible to the naked eye. As I write these lines, I hold before my eyes, whose myopia is corrected for normal vision, a slip of glass to which is attached the body of an average sized female acarus. With the out-door snow for a back-ground, the minute disk of the parasite is visible at a distance of twenty-five inches from the eye; and a medical friend who chances to enter the room at the moment, succeeds in accomplishing the same feat with ease.

Before pursuing this inquiry further I purpose to exhibit some evidence showing the frequency of the disease in certain of the Northwestern and a few of the Southern States of this country; and also the grounds for believing that the group of disorders which here especially concerns us, is of relative infrequency in other parts of the world.

The following extracts from some of the private letters addressed to the author by medical correspondents since the publication of his first paper on this subject, may serve to illustrate the first part of this proposition :

"_____, Ill., March 29th, 1885.

"Scabies has existed in this community for about two years, "and is treated here with very little success. Many patients "have suffered for six months before securing relief. I think "there is no doubt as to the nature of the disease.

"Yours very sincerely,

"_____."

In this connection it should be noted that the length of time during which some of these patients suffered from the supposed scabies, is that of the cold season in this part of the country.

“———, Ill., Mar. 27th, 1885.

“ I have a case of skin disease of the most perplexing character. The patient, a middle-aged lady, is otherwise in the best of health. Her sole trouble is an intolerable pruritus involving every portion of the body. No eruption can be seen. Brisk friction of the surface produces a deep mottling of the integument, with partial relief of the itching. I have had several similar cases, most of them in men, and the treatment in all has been very unsatisfactory. The little son and daughter of the lady whose case is mentioned above, were the only children found to be affected, of some ten or twelve cases. The mother thinks she caught it from the children. No two of the other cases occurred in one family. All were in excellent health and complained only of the itching. I do not believe that it is contagious.

“ Yours truly,

“———.”

“———, Ill., Jan. 2nd, 1885.

“ There is a form of scabies in this community which does not yield to the ordinary treatment by sulphur, etc. Can you kindly suggest anything that is capable of curing the disease ? ”

“———.”

“———, Iowa, Oct. 30th, 1885.

“ I have suffered myself from a very disagreeable attack of itching of the skin which has lasted for about two weeks, existing particularly upon the arms, body, and the inside of the thighs. It scarcely troubles me in the daytime, but is always much worse at night, after retiring to bed and getting in close proximity to a hot fire. I have treated within the last year between two and three hundred cases of this disease and I believe that most of them have recovered in the course of a month. It seems to prevail here as an epidemic.

“ Very respectfully yours,

“———.”

To this writer, as indeed to all who have sent communications upon the same theme since my first presentation of this subject, a reprint of that first paper was mailed. In consequence, however, of the large experience reported by this correspondent, a letter of specific inquiry was also sent him which elicited the following answer:

_____, Iowa, Nov. 25th, 1885.

"About three years since and at a time when a large force of laborers was employed on the railroad here, many of them were affected with a disease of the skin attacking the chest, sides of the trunk, and arms, characterized by an intense pruritus with decided nocturnal aggravation. In about two weeks, about a dozen of these cases were effectually relieved. After an absence of two years, I returned one year ago to this place, and found nearly the whole community affected with what they called 'the itch.' I have since treated between two and three hundred cases of it and have usually obtained complete relief in from ten to thirty days. I had patients from all the surrounding towns, some of whom had been under treatment for two or three months without resulting good.

"A few days since, a day laborer was found dead in his shanty in the outskirts of this town. Upon removing his clothing at a coroner's inquest, the entire body was found covered with a crust surmounted by scales which were nearly as thick as sole leather. This man had probably suffered for over two years and presented a picture of the full evolution of the disease in an untreated case. I do not like to disagree with your opinions, but I must express my belief that the disease is highly contagious and that its extension in the community is due far more to this fact than to any atmospheric influences. There is no doubt that a parasite is the cause, for I have examined both parasite and ova nearly every day with a glass. I have had it myself four times in the past year. Certainly no man can pay more attention to personal cleanliness than I. Even discarding the flannel undercloth-

“ ing that I have always worn, has failed to afford me any relief whatever. We have had here a few cases of genuine scabies but they scarcely ever come under the observation of a physician, as sulphur and lard soon put an end to them.

“ I am with very high regard, etc.,

“ _____.”

To this note an answer was returned begging for a full description of the parasite and its ova; the power of the glass used for its recognition, and a statement as to the habitat of the parasite, whether it burrowed within the skin, or lived upon its surface, or upon the investing clothing.

To this no answer was returned.

“ _____, Wis., Oct. 8th, 1885.

“ I have a patient 63 years old, in excellent general health, who has no eruption upon the skin but who, since the first of August, has suffered from an intolerable pruritus, with considerable aggravation upon retiring to bed at night. The result is an insomnia which is exceedingly distressing. The sensation of itching seems to be worse on the forearms. Other members of the family are affected with the same disease.

“ Yours very sincerely,

“ _____.”

“ _____, Wis., Nov. 5th, 1885.

“ I wish to inquire about a form of skin disease to which my attention has been frequently called during the past year. It rages in the camps of the lumbermen; in one instance twenty out of thirty men being affected by it, as also a number of families where the husband and children suffered if not the wife. I have now a merchant under my charge, aged 40, whose 5-year old boy has had it and recovered without treatment, the wife escaping though, of course, exposed. The itching is simply atrocious. Objectively, papules and sometimes pustules occur upon the extensor surfaces of the limbs. I have never found any eruption upon the inter-digital spaces. The papules are smaller and more discrete than those in sca-

“bies, and do not yield to sulphur. The patient now under treatment has the eruption upon the extensor surfaces of the forearms, scarcely any on the arms; in and about the axillary region; where the waistband of the trousers comes in contact with the skin; the popliteal spaces; the extensor faces of the legs; and a few pustules over the thickened palmar integument near the forearm.

“On the anterior surface of the wrist, and also in the palm of the hand there are two or three pustules; none in the interdigital space. I don't believe this is scabies. I regarded it as a form of eczema, and treated it accordingly without success, until I was forced to admit the contagiousness of the disease, and to adopt anti-parasitic treatment, which, as a rule, arrested it.

“Is there now recognized, or has there lately been recognized a new parasite, which could be regarded as capable of producing this disorder? I notice that a writer has lately claimed that such is the case, particularly in Ohio and the Northern and Western States. In the lumber districts it is commonly called 'camp itch,' and other names as little significant of its real nature.

“Yours very truly,

“_____.”

“_____,” Wis.

Nov. 11th, 1885.

“*My Dear Sir:*—I have read very carefully the reprint of your late paper on 'Winter Disorders of the Skin,' and after a careful perusal of the same I am almost persuaded of the truth of your position. The question of contagiousness is not yet settled in my own mind. When the disease first came under my observation I regarded it as contagious, but afterward, as a general eczema due to temperature changes, until cases occurred in families, where the father, for example, was the inmate of a lumber camp, became infected, and immediately after a visit to his family, whose children were also attacked. The belief is universal that this disease is contagious.

“Yours very truly,

“_____.”

The following is an interesting communication, on account of the fact that it comes to us from a point much more to the South than any of those heretofore noted.

“_____,” Tex.

Nov. 20th, 1885.

My Dear Sir:—Will you kindly give me your opinion of the following case: A gentleman, 26 years old, and married, came to me affected with a peculiar itching of the skin over the iliac crests, extending directly up to the axillæ, and down to the flexor surface of the arms; no lesions became apparent over the surface until after the skin was scratched, at which time small wheals appeared. In about a month the thighs and legs were also affected, and finally the entire upper extremities, and the body. No treatment has thus far proved effectual in relieving the pruritus, which is especially intense at night, and up to the present date has continued quite unabated.

“Yours very truly,

“_____”

Upon reading this communication, the reprint, to which reference is made above, was mailed to this gentleman, on the supposition that at that season of the year his patient had been subjected somehow to the same influence as others described in this paper. In response I received a communication from him, stating that the patient had been exposed to the action of severe cold in a trip which he had lately made and that after his return to a warmer climate the disease had entirely disappeared.

“_____,” Wis.

Jan. 5th, 1886.

My Dear Sir:—I am constantly seeing patients who apply to me complaining of a severe itching of the surface of the body, particularly when they are warm, and lying in bed. On examination the skin may present some small nodules. The skin is not swollen or reddened, but feels to the touch,

“ and is also subjectively, hot and dry. The patients are very apt to scratch the skin until pin-head-sized nodules appear upon its surface, which when torn, are covered with spots of dry blood at the apex of each nodule. Some patients are affected only upon the arms and legs. Others have it extensively over the entire surface of the body. Both the flexor and extensor faces of the limbs are affected. I have not yet seen the eruption occurring on the feet, hands, face, or genitalia. Adults, as well as children, are affected. Almost all are male patients. Some patients have the affection for several years; others for only a few months or weeks. The health of none is impaired in the slightest degree. I am quite uncertain as to the diagnosis. No treatment seems to give relief. The population here is largely made up of farmers, who eat a great deal of fat at the table, and most of whom work very hard. I shall be obliged if you will give me your opinion upon this question.

“Yours very truly,

“_____.”

“_____—, ILL.

Dec. 24th, 1885.

“*My Dear Sir:*

“In our vicinity there is a ‘lichen,’ ‘itch,’ ‘mange,’ ‘scratches,’ or something which affects a large number of people. It is characterized by itching, which is more intense on going to bed at night. The eruption is of the papular variety, and situated mostly on the extensor faces of the forearms, the thighs, the breast, and the abdomen. My treatment has been anything but satisfactory. I am a young man just beginning the practice of medicine, and wish to get all the information possible on the question. You will very much oblige me by giving me the diagnosis and treatment of this disease.

“Yours very truly,

“_____.”

Thus much for observation of this group of diseases occurring more particularly in this country. Turning to other countries we are at once struck with the fact that there is almost absolute silence on the part of writers and observers, respecting the prevalence there of such disorders. My paper published last March awakened some attention in England, France and Germany, as brief abstracts of it appeared in the medical literature of those countries, which contained, for the most part, the essential points it presented.

Glancing somewhat hastily over dermatological literature for the year 1885, I have discovered but few references to the disorders under consideration. In the *Annales de Dermat. et de Syphilig.*, for January 25th, 1885, appears an abstract of a paper by Obersteiner, originally published in the *Wien. Med. Wochenschr.*, No. 16, 1884. In this paper is described a case diagnosed by the author as one of pruritus hiemalis of Duhring. The mere fact that observation of a single case is recorded, alone suffices to suggest its rarity, even if the author did not himself admit, as he does, that it has not been possible to recognize it more often as occurring in the latitude where he is engaged in practice. Obersteiner's single case was that of a young man, 37 years of age, of vigorous constitution, who regularly, every month of October, suffered from a violent pruritus, greatly aggravated in the course of the ensuing winter and disappearing almost entirely in the spring, usually about the month of March. The maximum intensity of the symptoms was noticed at night. Almost all treatment proved useless. The general health was unimpaired, but the sensibility of the integument was greatly exaggerated

during the period of access. He notes two points: First, that variations of temperature must be largely responsible for the disease, even excluding severe cold, since his patient lived in Cairo, a point far to the south of Philadelphia, where Duhring first wrote his paper. Second, that the disease is to be regarded as a neurosis, whatever its cause, in view of the fact that his patient found his symptoms influenced by moral emotions. Obersteiner adds that a large number of physicians are reported to have observed the same disease in Austria, but that he does not regard the condition which they describe as identical with the pruritus hiemalis of Duhring.

Turning to the text books written by foreign authors we find descriptions of the group of disorders under discussion in the highest degree meagre and unsatisfactory. Many such make no note of it whatever; others do little more, as for example, Schwimmer, in Ziemssen's Hand Book of Diseases of the Skin, who devotes a single paragraph to the subject, a brief reference in fact to the existence of such a disease in America.

Interesting verbal communications made on the same subject to the writer, by prominent dermatologists and physicians in this country, indicate, as might be expected on *a priori* grounds, a divergence of opinion. Some of both classes are quite confident that a rather larger percentage of scabies is to be credited to the group of disorders here considered, than is represented by the percentage given in the statistics gathered by the committee of the American Dermatological Association. These statistics, however, continue to bear the same testimony upon the point at issue. In the year ending June 30th, 1884, there were three hun-

dred and thirty-nine cases of scabies reported from the several districts, thirty-three occurring in private, and three hundred and six in public practice. At that time, Boston reported one hundred and seventy-nine cases, the percentage of that disease to all cutaneous diseases coming under the notice of the reporters of that district, being ten per cent.

During the succeeding year ending on the 30th of June, 1885, there were four hundred and forty-two cases of scabies reported from the several districts, of which forty-nine occurred in private, and three hundred and ninety-three in public practice. This year, also, Boston exhibited the largest increase, reporting three more than one-half the entire number of cases of scabies registered in the country, viz., 224. It thus appears that the statement made in my former paper still holds good, namely: that it is the cities on the American sea board which are, as a rule, able to report the largest number of cases of scabies in the country; that the cities of the interior must usually furnish a considerably smaller number; and that the towns and villages of the Northwest and West will always suffer less from scabies, than will any other localities in the United States. The most significant exceptions occur where a larger or smaller number of newly-arrived immigrants have produced by settlement a focus in which also a colony of acari have been imported directly from the old world to the new.

But acari and atmospheric influences aside, is it possible that a parasite, hitherto unrecognized and undescribed, works the extensive mischief to which attention has been directed in these papers? Upon this point it is needful to speak with the just reserve based upon all the possibilities of the future. One of the most distinguished observers in this country lately in-

formed me that he had been in correspondence with a gentleman who seemed to have discovered a parasite as the cause of a curious eruptive disorder, similar in character to those described above, and found particularly in Ohio. While ready, however, to admit the truth of all demonstrable facts, present or future, we are in position to-day, to assert that the disorders we have considered, when tested by the standards according to which all contagious diseases of man and animals are proved to be such, fail of conformity in every particular. All the accumulated facts relative to contagion in the winter diseases of the skin, are explainable by the exposure to the same influences at the same time of large numbers of people in a given community, who, it is to be noted, are simultaneously relieved as well as attacked in atmospheric temperatures above or below a certain point.

As to the title or titles which should be given the disorders described above, it remains only to be said, that they must be for the present designated by descriptive terms merely. They constitute a group of affections, for the most part simple in character, the sole reason for their discussion in group, being an etiological one.

The terms "pruritus hiemalis," and "winter prurigo," unquestionably point to the prominent affection in this class, which, however, as I have endeavored to show, exhibit a very wide range of features from pruritus without eruption, and pruritus accompanied by an eruption solely induced by traumatism to extreme grades of inflammation of the skin, characterized by every one of its inflammatory lesions. The recognition of the causes of a disease does not justify the setting of that disease aside in a special category of its own. Pruritus is pruritus, whether induced by a parasite inhabiting the skin, an indigestible aliment in the stomach, or the action of cold upon the

outer surface. If need be, for the purpose of convenience, a term may be added referring to its chief etiological factor, which in the present case is the cold weather of the spring, of the fall, or of the winter; or, as has been shown in a previous paper, the relatively sudden changes of temperature from the higher to the lower degrees or the reverse, in any season of the year.

We now turn to the question of treatment:

A perfect prophylaxis and remedy are naturally secured by residence in a climate not subjected to the rapid changes which are experienced in this latitude. When the disease, in any one of its forms, has been pronounced, a removal to such climate is invariably succeeded by a more or less speedy relief of all the symptoms. In touching upon this subject, it is natural that I should refer chiefly to cases seen in Chicago and its vicinity. Patients resident in what is known as "the Upper Lake Region," who have been able when thus afflicted to spend a few weeks in St. Louis, Philadelphia, New York, Baltimore, or at points equally distant from their homes and in similar directions, have usually reported very marked relief within two weeks, and complete recovery in a somewhat longer period. Nor can it be said that this is a merely temporary benefit, for in several cases patients, who, after such residence in other parts of the country, have returned to that in which they first experienced their disagreeable symptoms, have either not suffered from a relapse, or have had the same symptoms occur in a milder form. In general it may be said that the Eastern, South Eastern, extreme Western, and Southern coast line, with some proximity to the sea even in winter, has offered a climate most propitious for securing the desired end. It cannot be said that such relief can be obtained with any degree of certainty in any one of the States forming the Upper

Lake Region, and this, of course, applies equally to the various springs and health resorts in these same limits. Neither can it be said that the method of exposing the skin to the action of heat and hot water, in the Turkish or Russian baths of the large cities, or of the baths in the various Hot Springs that are accessible in the region here defined, can be relied upon for securing the desired result.

It will always be true, however, that the majority of patients who consult physicians will demand what relief is possible for these ailments while they are attending to their business, in the localities where they reside. The problem in these cases is a very great one; it may in fact be described as the great dermatological problem for solution in this part of the world. At times with great ease and brilliant results, at others in the face of disagreeable drawbacks and relapses, the therapeutical solution is always reached in one way or another by clumsier agencies than those exerted by the sun as it nears the summer solstice.

Whatever be the condition of the skin, the following remarks, in regard to the general management of these cases, may be regarded as important. The patient should wear soft, undyed, and unirritating garments next to the skin. Woolen garments, especially those which are highly colored by aniline dyes, and even undyed woolen garments of every sort, should not be worn. Nor can it be said that silk underwear offers any guarantee against pruritic discomfort. It is preferable to wear soft, white, lisle-thread garments next the skin, and outside of these, as may be required by the temperature of the outer air and the vocation of the patient, warm, woolen, or other clothing, necessary to maintain a comfortable bodily temperature.

Patients in this condition should also avoid all ingestra that

are capable either of producing or of aggravating cutaneous rashes or pruritic symptoms. Here may be named, among medicaments, arsenic in every form, the salts of iodine and bromine, senna, quinine, chloral, valerian, glycerine, opium, and all remedies which are popularly supposed to "drive out" eruptions upon the surface of the skin, including, of course, every one of the so-called "blood-purifying" remedies.

Among articles of diet it is scarcely necessary to say that oatmeal, which is such a common food in this country, as also wheaten grits, pease, beans, etc., should be avoided. Buckwheat and other hot cakes, pastry, pickles, vinegar; such uncooked vegetables as celery, cabbage and cold-slaw; several of the preserved fruits, including strawberries, gooseberries, and raspberries; all canned fruits, canned meats, and canned vegetables; mushrooms and spinach; salads of all sorts; nuts, raisins, figs, dates, prunes, olives and the skins of grapes; tea, cocoa, and coffee; cheese and sausage; paté de foie gras, Caviare, and Welsh rarebit, game, and all salted, canned, and preserved meats; shell fish, especially lobsters, crabs, and clams have all produced pruritic affections. Fresh oysters in season, and oyster broths are not, however, as a rule, objectionable. Fried meats, fried fish, and fried vegetables are in general to be avoided. Wine, spirits, and beer are not permissible as beverages.

It is evident to any one who carefully examines this list that articles are left unnamed from which an ample dietary may be selected for even an active worker. Thus, one can permit the use of all animal and vegetable soups and broths, without free fat floating upon the surface; fresh, roasted, boiled, broiled and baked meats; poultry; fresh, broiled, boiled, or roasted fish; fresh, cooked vegetables, when not of the class named above; stale wheat bread, eggs, milk, and cream; fresh

butter; olive oil as a dressing, fresh fruits, the simple puddings, such as custard, rice, tapioca, and bread puddings; blanc mange, charlotte russe, ice-cream and omelettes.

Tobacco, both by smoking and chewing, is, in the case of male patients, to be interdicted as liable to sustain, if not induce, the irritability of the nervous system which constitutes such a prominent feature of the diseases considered.

As far as possible the patient should avoid extremes of temperature, more particularly at those periods of the day when the pruritus is at its worst; as for example, when the clothing is removed from the body at night, and also when it is replaced in the morning. Unnecessary exposure in an open carriage, or sleigh, should be avoided as liable to awaken the paroxysms of the disease.

It cannot be said that any remedy can be administered internally, which will specifically "cure". The internal treatment of this group of ailments is to be conducted on the general principles by which the physician is guided in the treatment of other simple disorders. Thus, for example, constipation, which is so frequent in the winter season, on account of the necessary restriction of the diet at that time, may be relieved by one of the simple laxatives, such as the mineral waters, the compound licorice powder, or the compound cathartic pill.

In many cases, when the nervous system is suffering greatly from nocturnal paroxysms of distress, a full dose of quinine at night, even though contra-indicated in most cases, taken on retiring to bed, and followed by a cup of warm milk in the morning before rising, will secure very marked results. Other indications are to be met as presented in the case of individual patients.

The local treatment is a matter of prime importance. In the severest cases if is unquestionably necessary to use the

hot bath. While it is understood that in general too much bathing is prejudicial to the management of the disorders under consideration, the hot bath is often needed, especially when the patient presents acute inflammatory lesions, raw, tender and torn papules, and infiltrations on the inside of the thighs, the lower belly, and about the knees and forearms. The bath is best taken at night and without soap. To each quart of hot water a teaspoonful of one of the alkalies is added, such as the bi-carbonate of sodium, or the baborate of sodium, or both. After the bath the skin is to be not rubbed, but patted dry, with warm, freshly laundered towels, and a soothing unguent applied. In all cases where it is possible, it is better to not only anoint the surface of the skin with the salve, but to spread the latter upon strips of muslin, to the thickness of a knife blade, which pieces are smoothly applied to the surface, and lightly bandaged, *in situ*, with a cheese cloth roller. This of course is more applicable to the extremities than to any other portions of the body; as for example the thighs and the forearms. Any of the simpler salves may be used for this purpose, but that which can be most trusted to accomplish the result in view, is some modification of the long known and still popular unguentum diachyli albi, of Hebra,* which has been called "the prince of ointments."

* R.

Olei olivæ (opt)	ff xv.
Lithargyri (opt).....	iii et 3 vi.
Aq. font.	q. s.

Mix the oil with a pint of water; heat in steam bath to boiling. Sift in the litharge in finely powdered state; stir continually, and boil till all particles have disappeared. Add water occasionally and stir till cool. Immediately after made, unite with equal parts of vaseline. Otherwise, the ointment must be freshly prepared whenever required.

This salve may be mixed with equal parts of vaseline and cold cream, and to each ounce of the whole may be added from five to fifteen grains of salicylic acid, the whole forming a compound which usually affords a great deal of comfort to the surface.

In place of this, the soothing salves, containing bismuth, creta preparata, and the oxide of zinc may be employed. A very useful formula is the following:

Oxide of bismuth	3i
Oleic acid.....	3i
White wax.....	3iii
Vaseline.....	3ix
Oil of roses.....	3ii

M. S. A.

[Anderson.]

In many cases however, the skin is in a state of such high inflammation that a still more soothing method of treatment must be pursued. In these cases it is exceedingly useful to adopt the plan to which resort is often had in the management of acute eczema. A lotion of the kind indicated in the following formula is thoroughly shaken up in its vial, poured into a cup or saucer, and then daubed over the part with a mop made of rags, rather than with a sponge, which only serves to entrap the insoluble portion of the lotion:

Creta preparata	3i
Oxide of zinc	3i
Dilute hydrocyanic acid.....	3ss
Glycerine.....	3ss
Lime water and elder-flower water each Oss.	

While this is daubed over the surface with one hand, the other is employed in gently rubbing into the skin one of the soothing ointments already described. By one or more of these means, the patient can be usually relieved to an extent

sufficient to ensure a comfortable night. In the morning, one of several courses may be pursued. Either the patient remains in his room, which should be heated to a barely comfortable temperature, ranging from 68° to 72° Fahrenheit, and remains there smeared with his salve dressing, practically as he was during the night; or if he or she must necessarily attend to the active employment of out-door life, the skin is lightly anointed with one of the salves, and then over it is dusted one of the powders which are used for that purpose. Inasmuch as a large portion of the skin has often to be protected in this way, the powder selected should be exceedingly fine, soft to the touch, and comparatively inexpensive. Few are better than the Oswego Gloss Starch which is sold by the grocer, though the several dusting powders used in medicine may be substituted for it in order to induce a greater anti-pruritic effect; as for example combinations of talc, salicylic acid, camphor, oxide of zinc, starch, Fuller's earth, and lycopodium.

Dr. Faithful, of Australia, has recently suggested a new method of preparing medicated powders for skin affections of this class. The remedy is first dissolved in alcohol, ether, or chloroform; the solution is then mixed with starch, or French chalk, and the menstruum allowed to evaporate. The evaporation is conducted without the aid of heat, and a fine medicated starch or chalk powder remains.

In many cases one or more of the lotions esteemed in the management of pruritus in general can be here also employed with advantage. Some of the formulæ of this class are suggested in the appended note.*

* Lotions containing the tars (ol. cadini, ol. fagi, ol. rusci) and carbolic acid, one to two per cent.; naphthol solutions, three to five per cent.; *e. g.*, B. ol. rusci 3 iiss, glycerin., 3 v, spts. vin. rect., 3v, lavend. spts., gtt. xx. M.

In the milder forms of this group of affections less elaborate local treatment may be adopted. Thus for example, the bathing may be omitted, and the salve simply applied by inunction of the affected surface of the body, great precaution being taken as to the character of the clothing worn next to the skin. Often it happens that this unirritating material, after having taken up some of the salve applied to the surface, is itself a dressing, which, disregarding for a few days the question of cleanliness, suffices to secure a great deal of relief. It is rare, even in these milder cases, that the dusting powder can be with advantage applied directly to the surface, as its peculiar "drying" effect is irritating to the surface of the skin. Many patients in this condition experience relief from taking any one of the simple salves, such as vaseline, cold cream, mutton tallow, and, as Fox, of New York, has lately suggested, the balsam of fir, lightly anointing the affected surface with it, and over that thickly dusting the powder selected for the individual case.

When the active evidences of the disease cease to appear, the infiltration of the skin, which is frequently left, will as a rule slowly subside under careful hygienic management.

Especial care must be taken, in all cases, of the extremities, more particularly of the hands and the wrists. The gloves worn during the seasons of the year when the temperature variations are most sudden and the mercury approaches the zero point, should be preferably of kid,

(Schwimmer.) **R.** Acid. salicylic., 3 i, spts. vin. rect. $\frac{3}{2}$ ii aq. dest., Oiss M. Solutions of corrosive sublimate 0.008 to 200. of water (Trousseau). **R.** Thymol. grs. xv. glycerin., spts. vin. rect., aa 3 v, aq. dest. Oiss M. Plumbi acet., grs. xx to $\frac{3}{2}$ ii of water; chloral-camphor, 1 part; glycerine, 2 parts; distilled water, fifty parts (some camphor will be here precipitated). **B.** Boracis, 3 ii, glycerin., $\frac{3}{2}$ i, spts. camph. $\frac{3}{2}$ ss. aq. ros. $\frac{3}{2}$ viss (Duhring). **R.** Glycerit. plumb. acetat. 3 i, glycerin. 3 ii, aq. ros. ad $\frac{3}{2}$ iv. M. (Squire).

covered with the muff or with the fur glove. Woolen gloves and those lined with lambs' wool, flannel, and fur, are particularly harmful.

Attention was called in my first paper to the effects produced at the wrist by the play of the cuff over the surface, both the linen cuff and the edge of the sleeve of the coat, "waist," great-coat, or cloak. These parts are best protected by strips of cloth, spread with the salve, and neatly fastened over the surface from a point extending beyond the bases of the metacarpal bones, to the middle of the forearm. The back and sides of the neck when affected should also be protected from the linen collar and ruching, as also from the collar of the cloak, coat, and waist, by a silk hand-kerchief.

Latapin*, in the Proceedings of the Caucasian Medical Society, has lately advised for frost-bitten fingers and toes the painting of the surface with a mixture of dilute nitric acid, and peppermint water in equal proportions. After this application has been made for three or four days, the skin becomes dark, and the epidermis is shed, a healthy skin appearing underneath. He has found this plan very effectual among soldiers, who were unable to wear their boots, and in consequence have had frozen feet.

Few of the more modern devices of the therapist in dermatology are as useful in the management of these disorders as in others. The salben-mülle and pflaster-mülle, that come to us from abroad, are more applicable to cutaneous disorders of limited area. The salve-muslins, however, containing salicylic acid, thymol, zincoxyd, carbolic acid, and ichthylol, may be used over the fingers, toes, wrists,

* Brit. Med. Jour., Sept. 5, 1885.

forearms, and ankles; also, in the way suggested by my friend, Dr. Hardaway, of St. Louis, as linings for the hat, cuffs, and collar.

THE WATERY-DISCHARGES OF PREGNANT WOMEN. *By*
CHARLES WARRINGTON EARLE, M. D., *Professor of Obstetrics, College Physicians and Surgeons.*

[Read before the Chicago Medical Society.]

Mrs. F. K. consulted me for a profuse watery-discharge which had taken place several times during her pregnancy, commencing at the third month. She was the mother of three children, and had always been free from any marked pelvic disease. The first discharge was clear and watery, and she estimates the quantity at about two (2) quarts. This came away in a gush, most of it being discharged at once, although there was a slight loss for some days thereafter. At first it was thin and clear, then slightly thicker, with the color of weak coffee. These discharges seemed to occur every two or three weeks, and were frequently attended with considerable pain. There was a decided diminution in the size of her abdomen after each discharge.

On October 30th I found her in great pain, and an examination demonstrated that the foetus was very low in the pelvis and apparently not surrounded with any liquor amnii. The os uteri was neither soft nor dilated. She was ordered anodynes and to remain in bed. On the 7th of November I again saw her, and found she had been having more or less pains since my previous visit. There was no dilatation. Ano-

dyne and rest were prescribed. Two days after, however, she was delivered, her gestation having been continued about 200 days. The child lived about one hour. She made a good recovery and resumed her place in her family in the course of two weeks.

Mrs. M., aged 27; in her 9th pregnancy. At the end of five months she commenced to have a flow of fluid which continued until the end of the seventh month, when she gave birth to twins, one living and the other dead. There was no escape of liquor amnii at her confinement. The same lady in her eleventh pregnancy commenced to lose fluid at the end of the seventh month, which continued until the completion of the full term, when she gave birth to a healthy child. She had what her attendants called a dry-labor.

Mrs. D. W. R., aged 31, the mother of nine children, has been pregnant since the 1st of July, 1885. On November 20th she said to a friend who was at her bedside that she was flowing, and asked to be supplied with a napkin. A sheet was folded and placed under the patient, which was thoroughly saturated with fluid; the discharge being equal probably to at least two pints. She had severe pains which simulated those of labor, lasting a few hours. On December 15th she had a similar discharge. The future of this case is yet to be decided.

Frequency.—These cases evidently take place with more frequency than we have, up to this time, supposed; but the older obstetric authors have noticed peculiarities of this kind, and given very fair descriptions of the complication.

Smellie says, page 179, Vol. ii, "Dribbling of fluid may go on for weeks, but a sudden gush is invariably fol-

lowed by parturition; the longest interval between a sudden gush and labor being seven days." In this he is certainly mistaken, as the history of many recorded cases and some of mine will demonstrate.

Denman, 1815, says: "Instances have been recorded in which the waters of the ovum are said to have been voided as early as the sixth month of pregnancy without prejudice either to the child or the mother. The truth of these reports seems to be doubtful, because where the membranes are intentionally broken, the action of the uterus never fails to come on. A few cases of this kind, somewhat similar, have occurred to me: A discharge of colorless fluid takes place, daily, from the vagina for several months preceding labour, which is due to the rupture of some lymphatic. Such labours are usually premature and the foetus small."

The same authority also cites a case where, after the delivery of the placenta, several pints of lymph were discharged.

Burns, 1822, page 238, says that discharges of watery-fluid from the vagina are not infrequent, and generally depend upon the secretion of glands about the cervix; the rupture of lymphatics, or from fluid collected between the chorion and amnion, or water from blighted ovum in the case of twins.

Dr. Pentland relates a case where coughing produced a discharge, the water being discharged at the fourth month; but labor only occurred at full term.

Merriman, in his work entitled "Difficult Parturition," 1826, relates a case of a lady—six months pregnant—from whom a profuse, watery-discharge occurred. She summoned a physician, who assured her that if pains came

on she would soon be delivered. She continued, however, to the end of pregnancy, having a profuse discharge each day. At full term she was delivered, her attending physician rupturing a bag of water, which appeared in no way different from usual cases. No opening was discoverable in either the placenta or the membranes, and he concluded that the discharge must have come from the outside of the membranes.

Chailly, edited by Bedford, 1844, gives a rather full account of hydrorrhœa, the description not being different from those I have already related. He says, however, that these discharges are more frequent than are generally supposed, but makes the erroneous statement that in nearly all these cases pregnancy is carried along to its full term.

Nearly all modern authors devote a short section to the consideration of this subject, giving different names, as their ideas of its origin and pathology are different.

Three separate pathological conditions seem to be, in many cases, confounded, and I see no way by which a differentiation can be made.

- 1st. A discharge of the liquor amnii.
- 2d. Discharges from increased glandular action.
- 3d. A possible collection of fluid between or outside of the membranes, and its irregular evacuation.

In my teachings I have been in the habit of speaking of hydrorrhœa, but never, up to a few months ago, had I seen a marked case. A study of this case with others collected from my own experience, and the perusal of the article written by Dr. Thomas C. Smith, of Washington, D.C., which appeared in the *Obstetric Journal* in May, has caused me to go over the subject carefully and to present

what I can obtain from the authorities in regard to these peculiar discharges.

Great numbers of cases have been recorded, but no one, up to this time, has demonstrated conclusively the source of the flow.

The etiology of these discharges has been the subject of very different opinions by different obstetric authors. Chailly says that authors have attempted to show that these discharges are due to the accumulation of fluid between chorion and amnion; to rupture of lymphatic vessels; to transudation through amniotic membranes; to rupture of the membranes at some remote point from the orifice of the uterus, and finally, to dropsy of the womb.

Lusk says the pathological processes involved in the disease are vascularity, hyperæmia and hypertrophy of the interstitial connective-tissue, and of the glandular elements of the decidua.

Barnes, in the *System of Obstetric Medicine and Surgery*, 1885, says in regard to these discharges and without entering into a critical discussion of the several theories, that it seems to be well established that there are five sources from which this fluid may come :

- 1st. A discharge from the cervical canal.
- 2d. The decidual origin.
- 3d. Transudation through the amniotic membranes.
- 4th. Hydatidiform degeneration of the ovum.
- 5th. Cauliflower excrescences.

Symptoms.—There are no symptoms which give any indication that these discharges are about to take place, and after they have occurred once there is nothing which will give us intimation that they are about to recur. The pain

is sometimes great, and at other times none will be experienced.

In a few cases, when the liquor amnii is drained off, there is a very perceptible diminution in the size of the abdomen, and the foetus will be found low in the pelvis, almost as if it were wedged into the cavity. The color and the consistency of the fluid will be different in different cases.

The *Differential Diagnosis* must rest between the following similar discharges:

I. From the discharge from hypertrophied cervical glands.

II. Fluid collecting between chorion and amnion, occurring only once.

III. Escape of fluid from amniotic cavity.

I. The fluid escaping from the hypertrophied glands must be small in quantity, and we would expect that it would continue for a considerable length of time. There would be no diminution in the amount of liquor amnii and the child would be found floating in the usual amount of fluid.

II. If the fluid collected between any of the membranes, and adhesive-inflammation surrounded it followed, a considerable amount of fluid might collect, and the discharges would be considerable at once, and might or might not be repeated. In such a case there would be no evidence of escape of true amniotic fluid, although there might be a lessened size of the abdomen.

III. Where the liquor amnii escapes there would be a greater tendency to uterine contractions; a more perceptible diminution in the size of uterine tumor, and a microscopical or chemical examination would certainly reveal some evidence of urine, as we know this exists in variable quantities in the liquor amnii.

Transudation through the amniotic membrane, although recently noticed by Barnes, has been mentioned by older authors, would give rise to the discharge of a very small amount of fluid.

This could hardly be differentiated from a slight discharge, taking place from the cervical glands. Fluids discharged from hydatidiform degeneration of the chorion or from cauliflower excrescence, would be so associated with the diseases which cause them, that the diagnosis would not be difficult.

Prognosis.—As far as my observation goes the life of the woman is not jeopardized, but she suffers from the constant discharge and becomes anaemic. The pain is sometimes severe, as I have before remarked, and the patient is full of gloomy forebodings and anxious in regard to the final result.

The foetus is usually born prematurely, and, in many cases, only lives a short time.

The treatment must necessarily be very simple—rest and anodynes being about all that can be suggested.

HYGIENIC CLOTHING. *By L. L. MCARTHUR, M. D.*

[Abstract of a paper read before the Chicago Medical Society on January 4th, 1886.]

The object of clothing should be the promotion and maintenance of good health, together with a feeling of well-being under all atmospheric conditions.

Consideration of the subject naturally subdivides itself into :

I. Materials.

II. Texture.

III. Form of clothing.

Chief among the materials used for clothing in the order of their respective merits are linen, cotton, silk, and wool; the latter being the best.

A few words as to these materials in the raw state.

Linen conducts heat better than cotton, silk or wool. It absorbs moisture and does not shrink. Cotton, also a vegetable fibre, which is hard, durable and does not shrink, has serious objections, in that it is very non-absorbent of moisture. It does not conduct heat as well as linen, but more rapidly than silk or wool.

Silk, an animal product, consisting of fine, smooth, round fibrillæ, having been in the liquid condition before leaving the body of the silkworm, possesses no central canal, and no oily coating. It is quite a good absorbent of moisture, ranking next to wool. At ordinary temperatures it always contains between 9 and 12 per centum of moisture. In its sale or purchase, account is taken of the amount of moisture in order to protect the purchaser from paying silk-prices for water.

Wool, the fleece of sheep, an animal fibre, whose function in nature has been two-fold, the protection from cold, and an aid to evaporation of cutaneous moisture, is admirably fitted as a material for clothing. It permits but slow radiation of heat, and absorbs moisture better than any other clothing-material. It does this, according to Parkes, in two ways. 1st. By interposition between the fibres. 2d, By penetration into the central canal. His experiments led him to believe its hydroscopic powers double in proportion to its weight and quadruple for surface, as compared with cotton or linen. Perfectly dried wool has the power of absorbing 50 per centum, by weight, of water.* Under ordinary conditions it contains 12 to 18 per centum.

Other things being equal, then, woolen fabrics will best pre-

vent too rapid radiation of heat, silk next, cotton third, linen fourth.

Wash-leather, buckskin, and chamois-skin need not be considered, for one or all of the following reasons: Expense, poor provision for evaporation, poor washing qualities.

As absorbers of moisture rank, respectively, wool, silk, linen and cotton.

The advantages of cotton over wool lie in its cheapness and non-shrinking qualities. If properly constructed, however, the advantageous properties of wool can be utilized, without the shrinking by using a cotton framework, into the meshes of which the loose raw fleece is worked.

That fabric will be best adapted for health, which combined with greatest porosity, possesses the least (a) conductivity, (b) greatest hydroscopic power, and (c) best shape.

By porosity is understood the freedom with which air can pass through the interstices of a fabric. Pettenkoffer's practical demonstrations with the following cloths showed that if heavy flannel be taken as permitting 100 parts of air to pass, linen permitted 60.3 or 60 per centum; lambskin 50.7 or 50.7 per centum; silk fabric, heavy, 41.4 or 41.4 per centum; glove-leather 1.5 or 1.5 per centum.

The conclusion follows that porosity does not injure the powers of preventing radiation, (it even increases it) for flannel, admittedly the warmest clothing, permits the freest circulation of air.

In consequence of the fact of a fabric's possessing great porosity, it contains in its interstices, what might be called "residual air." Whether gases possess conductivity is open to discussion, but this is certain, that such power is very small. Could we by any means envelope the body in a layer of stationary air we could reduce the heat-loss to a minimum.

A striking example of the poor conductivity of *stationary air*, is related by Dr. Kane, the Arctic explorer, who found that on perfectly still days they could withstand without suffering a temperature of —70 F., with ears and hands exposed, but the moment a breeze sprang up it became necessary to seek immediate shelter.

Although impossible to perfectly accomplish this (i. e., the surrounding of body in a stationary envelope of air), that cloth or fabric which most nearly approximates this, other things being equal, will prove itself the warmest as well as best adapted for evaporation of cutaneous moisture. Such a nearly stationary air occurs naturally in the various pelts, and although in many the integument is visible beneath, yet they can withstand the most rigorous weather. Thus Krieger's experiments with tin cylinders containing hot water with two coverings of different materials, between which an interval of $\frac{1}{8}$ to $\frac{1}{4}$ inch was left, proved (after subtracting the amount due for conduction) the impediment to radiation by the second layer to be, viz.: linen, 32; silk, 32; flannel, 29.

Thus showing that the stationary air, rather than the material out of which the second layer was made, was the main factor in preventing radiation.

He then experimented with single and double layers of the same material surrounding these cylinders, obtaining the following instructive results; the numbers representing the proportionate loss of heat through double to single layers, the losses through the single ones being taken as 100.

Double Stuff "Doppel Stoff" Fleece-lined cotton,	69	—	76
Buck-skin,	"	"	"
Flannel,	"	"	"
Home-spun linen,	"	"	"
Stout, extra-heavy silk,	"	"	"

74—86

86

91

94

From these results the conclusion is obvious that the substance and its weight are of less consequence, where *radiation* is in question, than its texture and volume. Believing that the explanation was due to the "residual air," experiments have been made with loose wadding, noting the rapidity of fall of temperature, on compressing the same wadding, when the fall was far more rapid.

Again, the loss of heat through a rabbit's fur being taken as 100, when shorn of its hair it rose to 190; and further destroying its porosity by a coating of gum-arabic, it rose to 296. (Dict. Hygiene.)

By greatest porosity best provision is made for the evaporation of perspiration, the quantity of which varies greatly under different conditions. In a day of rest the amount as determined by Seguin and Voit is 900 grams (about 1 quart). During exercise it may increase to quantities incredible, were the figures not furnished by the best of observers. For example, Dalton mentions its increase to 380 grams per hour! and Dr. Southwood Smith has seen it rise to 1,600 grams per hour during violent exercise in a heated atmosphere! Now if a clothing possess no porosity, *e.g.*, the mackintosh, and rubber clothing generally, even without exercise there would collect somewhere beneath it a quart of water, but if exercise be indulged in, the quantity may become large indeed; particularly after the atmosphere beneath has been surcharged with vapor and evaporation ceases to occur from the surface, and with it the grateful cooling process. The French Government has not permitted its introduction into its army for such obvious reasons. Of course, for a short time during a shower they may and do prove useful; but I am convinced that many have incurred

most serious injury, even death, by throwing off the rubber clothing, after the inner clothing has become permeated with moisture, when the chilling, incident to the sudden increased evaporation, has resulted in some acute inflammation.

Moreover, the evaporation of the normal cutaneous moisture (with that of the lungs) requires 750 heat units or one-fifth of all the heat produced in the system (Dalton). Conservation of part of this loss, contributes an equivalent amount of force to the organism, since heat and force are interchangeable terms. *This can be done!*

Under normal conditions evaporation of perspiration occurs in the "insensible," *i. e.*, vapor-state, but change of these conditions (increased heat, and moisture in the atmosphere, increased exercise, etc.,) causes it to collect upon the integument in the visible or sensible state, and unless conducted away, may chill the body. Prevention of such condensation will avoid such dangerous and deleterious influences. The cause of condensation is a lowering of the temperature. We have simply to maintain its temperature until at a perceptible distance from the body. This can be accomplished by a layer of loose wool, such as is hereafter described. The "residual air" having been once raised to the body temperature, it remains so, and the vapor does not assume the liquid state until meeting with the chilling influences in the outer layer of cloth.

Finally, bodies passing from the gaseous to the liquid state emit the heat—latent heat—which was essential to their assuming the gaseous condition. This occurring in the case of perspiration in the cloth-interstices increases by just so much their warmth, in other words lessens the demand for heat-production.

Before leaving the subject of texture, note should be made of the importance of its being of a loose nature. However great the hydroscopic power of a material in the raw state, if it be tightly woven that power is greatly diminished, or even quite destroyed. Hence the advantage of loosely-knitted over tightly-woven goods.

Important indeed is the proper fitting of clothing. However good the materials they may then not accomplish their purpose for the following reasons :

I. By close application to the skin certain materials acting as cutaneous stimulants, maintaining an active equable circulation. Wool possesses this property most markedly; even in some delicate skins proving an irritant. A very marked increase of oily matter is excreted over those areas where oil-glands exist in greatest abundance, *i.e.*, mesial line of thorax, in front and behind ; thus improving the flexibility of the skin.

II. By fitting neatly, chambers of air heated by the body are not with every change of position of the wearer forced out, as occurs in ill-fitting clothing. Upward currents of air naturally occur, and if permitted to exist carry off large amounts of caloric. Simple attention to these two facts reduced the death-rate of the Würtemburg Army Corps, from 3.22 to 1.64, as compared with the other departments of the German Army.

The general application and advantages of such an ideal clothing to diseased conditions, it is needless for me to describe to a body of medical men ; but particular references ought to be made to rheumatism and nephritis ("kidney troubles"). To the former because best provision is made for cutaneous elimination (always acid !) so essential

in that disorder, in which there is so marked a diminution in the alkalinity of the blood; to the latter because sudden congestions are obviated in an organ already overworked, by preventing sudden chilling of the surface.

It only remains for me to call your attention to my accidentally finding such a clothing upon a patient of mine (Mr. Jaros), and the tests to which I have put it.

He described its history and manufacture as follows:

“While suffering from an attack of rheumatic sciatica in the Harz mountains, following a peasant’s advice I enveloped myself in loose lamb’s fleece, which he provided, and I experienced speedy relief. On reaching Berlin I consulted Chief-Councillor-of-Health, Dr. Abarbanell, who advised me to have constructed some underwear with a fleece lining. I sought a weaver and had some underwear knitted, into the meshes of which were worked, ‘by hand,’ during the process of knitting, layers of loose lamb’s wool.”

Now, gentlemen, this device was a particularly happy one, in that all the requirements of a truly hygienic wear are provided for.

Porosity, warmth, absorbent powers, and elasticity. With advice he set to work and perfected a modification of the knitting-machine which incorporated into the meshes of the cloth, loose lamb’s wool. The samples presented speak for themselves as to its success. By the use of such a fabric, perspiration (unless excessive indeed) remains in the insensible state until it meets with the cooling influences externally in the cotton framework, the integument remaining dry; while the cotton back, as well as the linen shirt over it, may be “wringing wet.” Exposure to cool draughts with such a suit does not chill the integument because the sudden

increased evaporation occurs at a distance from the skin, and is separated from it by a layer of wool.

To test the soundness of the theory I submitted myself to a temperature of 115°F., under as nearly as possible the same atmospheric conditions, with the three chief winter suitings, and obtained the results in table below:

	Jaros Hygienic Wear.	"Nonotuck" Silk-suiting, heavy.	Cartwright & Warner's.
Weight after " before ex- posure	8,020	7,867	10,840
Difference	1,010 grs.	727 grs.	1,240
Degree of absolute dryness of air	61.827	77.32	69.947
Temp. dry bulb therm " wet " "	115°F 89°	113°F 83°	116° 88°
Sensations	Warm but not sticky; outer surface damp; skin dry where wear touches; comfortable.	Cooler than other wear; sticky; skin damp; comfortable.	Sticky; clam- my; wet through; un- comfortable.

From these experiments it is to be seen, that of all the perspiration exuded, the silk retained (by a small amount) the least; the hygienic wear the next, and the English woolen goods the most. Note, however, must be taken of two facts concerning the experiment with the silk-clothing.

1st. The temperature was 2°F. lower than when testing the hygienic wear and 8° than the English goods. Hence less perspiration was thrown out.

2d. There was a difference of 15.5° of *absolute* dryness of the atmosphere, hence evaporation took place more rapidly from the silk-goods in the dryer atmosphere. The barometer remained almost stationary during the three days of observation.

On emerging from the hot-room into one of a temperature

of 70° F., an immediate chilling was felt with the silk goods; while the English gave a sensation of moisture and cold. The chilly sensation *was not experienced* with the woolen-lined hygienic-wear.

CONCLUSIONS.

- 1st. That the fleece-lined goods are warmest.
- 2d. Permit at least equal evaporation with the silk.
- 3d. Guard against sudden chilling of the body.
- 4th. Are cheaper than silk and as cheap as Cartwright & Warner's.
- 5th. Are particularly indicated in rheumatism and kidney-disease.

SOCIETY REPORTS.

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF CHICAGO.

Regular Meeting, 18th December, 1885.

- I. JAGGARD. *Two Recent Models of the Axis-Traction Forceps.*
- II. BYFORD. *Report of a Case of Pelvic Abscess, with Remarks upon the Treatment.*

The PRESIDENT, DANIEL T. NELSON, M. D., in the chair.

- I. PROFESSOR W. W. JAGGARD read a paper entitled, *Two RECENT MODELS OF THE AXIS-TRACTION FORCEPS.*

The object of the paper was not the description of some modification by the writer, although such a contribution to the literature of the subject would be perfectly legitimate

in view of Pajot's witty remark to the effect "that he does not reproach a man for having invented a forceps, since that might happen to any one."—(Barnes.)

BREUS and FELSENREICH, formerly assistants respectively in the third and first obstetrical clinics of the Vienna General Hospital, have recently made important alterations of Tarnier's axis-traction forceps. The importance of these modifications was so great that no apology was demanded for calling attention to the instruments.

Historical.—As the result of the labors of Sir J. Y. Simpson, Nägele, Busch, Levret and others, the low forceps operation may be regarded as a comparatively perfect operative procedure, both as regards instruments and mode of operation. The case is different with the high forceps operation. This operation is always difficult, and sometimes dangerous, with the instruments mentioned. The cause is obvious. The applied force can be resolved into two components, one in the direction of the axis of the plane of the inlet, the other perpendicular to the first, directed towards the posterior surface of the symphysis. The first component is alone active in causing the descent of the head; the second makes the extraction more difficult and exposes the maternal tissues between the head and symphysis to traumatism. As remarked by Schauta, (*Grundriss der Operativen Geburtshilfe*, Wien, 1885, p. 162,) "the unphysiological and therefore mischievous element in the operation of the forceps, as compared with the effects of uterine contractions, when the head is at the inlet, consists in the fact that the forceps draws the firmly-held head in a direction which it can never follow, while the uterine contractions simply drive the head into the pelvic cavity, and permit it after that to seek

the direction of least resistance." The older obstetricians, fully recognizing these facts, attempted to apply the power to the classical forceps, in such a way as to secure a more favorable direction of traction. Osiander (1799) and Stein, Sr. (1805) may be mentioned among the older obstetricians, who devised instruments for making traction in the axis of the inlet. Hermann (1844) (Kilian's *Armamentarium lucinæ novum*) constructed an instrument, in which an iron lever is attached to the lock. J. P. Hubert (1860) attached a vertical iron lever to the extremities of the ordinary forceps. This lever was subsequently attached to the lock. Eugène Hubert, his son, constructed an axis-traction forceps with parallel branches and a sharp perineal curve. Chassagny, Joulin, Pros, Poulet, Moralès Apaca (1871) and others have constructed various types of axis-traction forceps at a more recent period. In many of the modern French instruments an attempt has been made to apply some of the well-known principles of veterinary surgery.

TARNIER'S FORCEPS. In 1877, Tarnier, following in the wake of Hermann, Hubert, and the more recent French inventors, constructed and published a description of his well-known instrument. Since that time, he has produced more than thirty distinct models. His last model consists of the classical forceps of Levret, (without a perineal curve) and axis-traction rods attached to the posterior, inferior border of the blades, or spoons. Tarnier claims a number of advantages for his instrument over any other axis-traction forceps. He claims that it is superior to the classical instruments in the following particulars:

1. It is possible to apply traction in the direction of the principal pelvic axis.

2. Sufficient mobility is conferred upon the child's head to permit it to seek its way through the pelvis in the direction of the least resistance.

3. The handles indicate to the operator the direction in which traction should be made.

With reference to the first proposition, it may be said that traction with Tarnier's forceps is not made in a curved line, accurately coincident with the principal pelvic axis, when the head is at the inlet. Nor is traction in this direction absolutely necessary, as remarked by Schauta, seeing that the resultant of the forces, developed by uterine contractions, and the resistance opposed by the pelvic floor, does not propel the head in the direction of the principal pelvic axis.

The handles, as indicators of the direction in which traction should be made, are of relatively slight value.

On the one hand, the operator who is at all qualified to apply the forceps to the head at the inlet, ought to have a correct conception of the direction in which traction should be made. On the other hand, strict attention to the handles may prevent the operator from observing a number of important events, ex. gr., the relation of the head to the vulva, slipping of the instrument, etc. (Schauta.)

Finally, the handles are not a correct indicator of the direction of the principal pelvic axis.

The advantage of Tarnier's forceps over its predecessors lies in the mobility conferred upon the foetal head by the joint, uniting the blades and the so-called axis-traction rods. The head does not follow the direction of the principal pelvic axis, but seeks the path of least resistance. In consequence, the operator is spared the fatigue of unnecessary effort, and the mother, the dangers of traumatism from violent traction.

I. BREUS has recently constructed an instrument which has a great advantage over the forceps of Tarnier, in that a greater degree of mobility, during traction, is conferred upon the head.

The continuity of the blades (*Löffel*) is interrupted at, and below, the *fenestrae*, by a strong flat joint, which admits of movements in the sagittal direction, and corresponding variability in the angle at which traction is applied to the head. The superior ribs of the instrument are prolonged, and turned upward like spurs. These spur-like prolongations are joined by a metallic rod in order to preserve a certain parallelism of the blades.

Apart from these peculiarities, the instrument is identical with the original model of Sir James Y. Simpson's forceps.

This instrument, devised by an obstetrician of large experience, is employed on an extensive scale at Vienna, in Gustav Braun's obstetrical clinic. Schauta (*Grundriss der Operativen Geburtshilfe*, Wien, 1885, p. 164 et seq.) recommends the instrument as the most perfect axis-traction forceps in existence, to his classes at the University of Innsbruck. Fürst's recent favorable note on Breus's forceps in the *Centralblatt für Gynäkologie*, 1885, is well known.

II. FELSENREICH'S MODIFICATION OF PROFESSOR ALEXANDER SIMPSON'S MODIFICATION OF TARNIER'S AXIS-TRACTION FORCEPS.

In 1880, Professor Alexander Simpson, of Edinburgh, sent to Professor Carl Braun a modification of Tarnier's axis-traction forceps, which at once superseded the French instrument in the first obstetrical clinic of the Vienna General Hospital. Simpson substituted Sir J. Y. Simpson's original model of the classical instrument for Levret's. The compression-screw is located on the upper third of the superior surface of the handles. Comparatively unimportant modifications were made with reference to the traction-rods, and the hard-rubber handle, into which

the traction-rods fit. Felsenreich has materially enhanced the value of Professor Alexander Simpson's instrument by a number of important alterations.

Felsenreich's modification of Professor Alexander Simpson's axis-traction forceps, as shown by the model presented, manufactured by Mr. J. Leiter, of Vienna, during October, 1885, consists of the following parts:

I. A practically unaltered model of Sir James Y. Simpson's forceps (*Wiener Schulzange*).

II. Button-hole perforations, one behind each *fenestra*, into which traction-rods are inserted, and maintained by the buttons on the ends of the rods.

III. A removable compression thumb-screw, which sinks into a groove made in the extremities of the handles of the Simpson forceps.

IV. A hard-rubber handle for the traction-rods. The arrangement for the insertion of the traction-rods into the hard-rubber handles differs from the mechanisms in Tarnier's and Alexander Simpson's axis-traction forceps.

The attachment of the compression-screw to the ends of the handles, and certain changes in the curve of the axis-traction rods have been made at a comparatively recent period, but prior to 1883.

Dr. L. E. Neale, of Baltimore, published an article in the September number of the *American Journal of Obstetrics*, 1885, entitled "An Obstetric Forceps." In this paper Dr. Neale describes an axis-traction forceps, devised by himself, which differs in no essential particular from Felsenreich's modification of Alexander Simpson's instrument. Editorials have appeared in the *Journal of the American Medical Association*, 26th September, 1885, and the *Therapeutic Gazette*, 15th December, 1885, calling attention to the facts, that a forceps, identical with

the instrument devised by Dr. Neale in all essential details, had been constructed several years before in Vienna by Dr. Felsenreich, and that Dr. Neale had probably forgotten the existence of that instrument, although he had seen it in active operation in the lying-in ward of Carl Braun, in various courses on operative obstetrics, and in the shop of Mr. J. Leiter, the instrument-maker to the Vienna General Hospital. The only criticism that the writer would make, with reference to these editorial notes, was, that Dr. Felsenreich, not Dr. Neale, applied the compression thumb-screw to the ends of the handles. Dr. Neale has made some trivial modifications in the hard-rubber handle and the mode of insertion of the traction-rods. Dr. Neale made no allusion to Alexander Simpson's modification of Tarnier's instrument in the paper mentioned, and his allusion to Dr. Felsenreich's suggestion of the button-hole joint is, to put the case very mildly, disingenuous.

In conclusion, Professor Jaggard said that he was of the opinion that the axis-traction forceps of Breus and Felsenreich were superior to the most recent model of Tarnier's, or any other axis-traction forceps that had come under his observation. He requested that the discussion be limited to the comparative merits of the forceps presented—Breus's and Felsenreich's—and other recent models of the axis-traction instrument.

DISCUSSION.

DR. JOHN BARTLETT said that he had devised an axis-traction forceps in 1880, identical in principle with the instrument constructed in 1860 by the elder Hubert. His attention had been first called to the coincidence by Professor Lahs's monograph on *Die Achsenzug-Zangen*, Stuttgart, 1881.

DR. HENRY T. BYFORD thought the instrument described by Dr. Neale in the September number of the *American Journal of Obstetrics*, 1885, was identical in all essential particulars with

Felsenreich's modification of Alexander Simpson's instrument devised two or three years before.

DR. PHILIP ADOLPHUS, PROFESSOR A. REEVES JACKSON, DR. H. P. MERRIMAN, DR. H. P. NEWMAN had never observed indications for axis-traction forceps; had never employed such instruments, and thought they were unnecessary.

PROFESSOR JAGGARD said he had no desire or intention to discuss the general subject of axis-traction forceps, and had expressly requested that the discussion should be limited to the consideration of the relative merits of the instruments presented for examination, (Breus' and Felsenreich's) and other modifications of the axis-traction forceps. He thought that gentlemen of limited experience in cases indicating the high forceps operation, and particularly those who had absolutely no experience with axis-traction instruments, should be temperate in their criticism. Carl Braun, Pajot, Charpentier and others had practically rejected such instruments, but only after serious and experimental consideration of their merits. On the other hand, many younger obstetricians, including Schauta, Felsenreich, Breus, Ehrendorfer, thought there were cases in which they might be profitably employed.

II. DR. HENRY T. BYFORD read a paper, entitled, REPORT OF A CASE OF PELVIC ABSCESS, WITH REMARKS UPON THE TREATMENT.

Mrs. T., aged twenty-five years; married five years; German descent; of nervous temperament; small and slight in figure, but in good general health, consulted me, during the fall of the year 1884, for sterility and dysmenorrhœa. She had never menstruated without pain, but had otherwise enjoyed good health. An examination revealed a small uterus and cervix, with acute anteflexion and consequent apposition of the anterior and posterior uterine walls. Slippery elm tents, used

about once in eight days, alternated with glycerine tampons, had for their effect a gradual relief of the dysmenorrhœa.

About the middle of the following February, I was called to her house to treat her for a severe attack of pelvic cellulitis, contracted a week before while returning home from a dance. The whole pelvic connective-tissue seemed involved, and large tender lumps could be felt externally in the left iliac region.

Six weeks from the beginning of the attack, an abscess opened into the anterior wall of the rectum, about two inches from the external anal orifice. On account of the extreme debility of the patient, her horror of operative procedures, and the absence of any well-marked fluctuation, all surgical interference with the suppurative process had been out of the question.

Palliative treatment was instituted and continued without effect until the sixth of June. In the meantime the pulse remained in the neighborhood of 120° F., and the temperature fluctuated between 99° F. and 102° F.; attacks of acute suffering and septicæmic diarrhœa required opiates for their relief; the bacillus tuberculosis was discovered in the pus; yellow pigmentary deposits covered her face, and emaciation became extreme, her weight ranging between eighty-two and eighty-three and one-half pounds. Her courage began to fail, and finally after the concurrent recommendation of the consultants, Drs. Wm. H. Byford, J. E. Owens, George M. Chamberlin and Martin Matter, she consented to an operation.

Accordingly, on the 6th of June, Dr. Wm. H. Byford operated according to his usual method in such cases. After etherization, he forcibly dilated the sphincter of the anus, tore open the fistulous track with the finger, and then enlarged the abscess in the same manner, in the direction of the lowest part of the cavity, until it readily admitted two fingers. I then

made a digital examination, and found the abscess to extend across the pelvis, behind the uterus and broad ligaments, above the level of the fundus uteri on the left side, and to be filled with bands and projecting masses of granulation-tissue of about the consistency of freshly coagulated blood. Previous treatment, except to diminish and control the septicaemia, had evidently been a complete failure. All of this medullary tissue was then scooped out with the finger and the cavity thoroughly cleansed with a two and a half per cent. solution of carbolic acid.

The highest temperature after the operation was 99° F., on the day following. Perfect drainage had been secured, for at the time of each dressing no pus was found inside of the abscess.

The cavity of the abscess was treated by irrigation with antiseptic solutions, insufflation with iodoform and the introduction of cupric sulphate.

Early in September she was attacked with the then prevalent epidemic, dysentery, and died on the 23d instant.

At the post-mortem examination made about thirty hours after death, I was somewhat hampered on account of a promise, exacted by the husband, that no organ should be taken out of the body, and by the fact that I had but thirty minutes for work before train time. The body had again become extremely emaciated. Abdomen was flat. An incision was made from a little above the umbilicus to the pubic bone. The pelvis was filled posteriorly with a solid mass of plastic tissue, which had drawn the uterus backwards to within about half an inch of the sacrum, so as to put the anterior vaginal wall upon the stretch, and had buried the uterus and other pelvic organs in its substance. Both round ligaments were seen

issuing from this mass. It was necessary to cut down about half an inch before reaching the depressed uterus, and to tear through solid tissue behind it to arrive at the rectum below. The finger broke through into the rectum, behind the dimpled cicatrix that marked the site of the former outlet of the abscess. The left broad ligament was then felt to be represented by, or inclosed in, a tough band half an inch thick antero-posteriorly, extending from the uterus to the left side of the pelvis. The left ovary could not be found. A small flat piece of what seemed to be ovarian tissue was found adherent to the bladder on the right side. The right broad ligament was apparently disorganized and inseparable from the plastic deposit. The rectum was held inflated at the point where it issued from the pelvis, was dark colored and injected on its external surface, and blackish and softened on the internal. Neither the appearance nor the odor of an abscess could anywhere be discovered.

There seem to have been two hinges, as it were, upon which the treatment of this abscess turned: first, the operation per rectum: second, the cauterization by sulphate of copper. Both secured a large opening at the lowest portion of the pyogenic cavity, and brought away the unhealthy granulation-tissue. Had the patient consented to have the unobstructed outflow of the pus maintained by one or two subsequent dilatations, similar to the first one, the cure would undoubtedly have been more rapid. As it was, the contracting sphincter and abscess outlet rendered the drainage and irrigation imperfect. Progress toward recovery was, however, again inaugurated upon the melting away by the sulphate of copper of the newly and imperfectly formed cicatrical tissue, reproducing the opening made at the time of the operation and by the

destruction of the degenerative deposits and cauterization of the chronic pyogenic surface. The only kind of treatment preferable to this free drainage and clearing out method is the strictly antiseptic, which, after the pus has once found a way into the rectum, can only be accomplished by first closing this septic inlet.

The treatment by a counter opening in the vagina is much less preferable, because a recto-vaginal fistula, difficult of cure, and liable, like anal fistula, to inoculate the system with tuberculosis, would be left.

The treatment by abdominal incision cannot for a moment be entertained, for at least two reasons:

1st. It is necessarily followed by a recto-abdominal fistula of great length, which is incapable of being promptly cured, and is apt to become an unfailing source of systemic infection. Those patients already operated upon, as far as reported, have usually either died shortly, or within a year or two, imperfectly cured. They would have, on an average, lived about as long without the operation. In fact, it is not impossible that one such, whom I had, previous to the operation, an opportunity of watching for a short time, would finally have recovered through the process of nature. To operate as does Lawson Tait, before the abscess has discharged, and then treat it antiseptically through its single opening, is an entirely different matter.

2d. The danger of an abdominal incision should never be incurred without a prospect of compensation in the way of bettering the patient's chances of recovery. Neither theory nor practice as yet prove such compensation to be attainable.

In some cases one dilatation per rectum, without after-treatment, has sufficed for a cure; in other cases two or more, with

subsequent antiseptic irrigations, have become necessary. But as a general rule it may be said that, unless instituted too late, the procedure is safe and the recovery sure.

DISCUSSION.

PROFESSOR CHRISTIAN FENGER made some remarks on laparotomy as compared with other operations, of which the following is a brief abstract:

When a peri-uterine abscess points somewhere in the vagina around the lower part of the uterus, no surgeon would, of course, think of doing anything but opening the abscess, inserting a drainage tube, and by washing out, endeavoring to effect the closure of the cavity. But in some cases the opening into the vagina is just as ineffective as a spontaneous opening into the rectum. In obstinate cases of this kind laparotomy, at a later period, will have to be performed.

There is, however, no doubt that secondary invasion of septic poison, when the abscess is opened from the vagina, is much more difficult to prevent than invasion into the abscess from the abdominal opening. It is only in this way that we can account for the difference in the course of the after-treatment of peri-uterine abscesses opened through the vagina and through the abdominal cavity; a difference that Lawson Tait rightly calls attention to as being decidedly in favor of the abdominal operation. Here the abscess closes more quickly, and the course of the after-treatment is much less febrile than in the vaginal operation.

Sometimes a peri-uterine abscess will point into the rectum, sufficiently low down to permit of an opening here. It does not seem probable that the access from the rectum will be very promising, as effective drainage is next to impossible; but the cases of cure by spontaneous opening into the rectum evidently make an operation here permissible, and perhaps

advisable, but only as a trial. If the abscess does not retract within a reasonable time, other measures must be resorted to.

It is needless to state that if a parametritic abscess points anywhere along the iliac fossa, it should be opened and drained from this point; but this does not belong to my subject of to-night, as I desire to call attention only to strictly circum-uterine abscesses, which can only be reached from the vagina or from the supra-pubic region.

When a circum-uterine abscess does not point downward, and, in fact, does not point anywhere, it is then the surgeon's task to find the safest way into the abscess through a smaller or larger amount of surrounding tissues.

We shall first consider the vaginal operation :

When so eminent an authority as Schröder, of Berlin, advocates this method of reaching a high peri-uterine abscess there must be cases in which this operation is advisable. From a general point of view an extra-peritoneal outlet of the abscess through the vagina would seem to be safer than laparotomy, upon the same grounds as a vaginal hysterectomy is safer than Freund's abdominal hysterectomy, and Schröder's successful operation, already mentioned, vouches for the method.

At the same time, I firmly agree with Lawson Tait, that there are some grave objections to the vaginal operation. In the first place, a high-seated peri-uterine abscess is difficult to reach. It is difficult to work with safety two or three inches above the introitus of the vagina, in tissues that are immovable, and where the parts cannot be drawn down toward the operator. These difficulties are, of course, of less importance in the master hands of an operator like Schröder, but increase in significance for less experienced surgeons.

But the operation through the vagina is more or less an operation in the dark. We may be dissecting up along the

posterior surface of the neck of the uterus, and may open into recesses of the peritoneal cavity between the abscess and the uterus. Further, it might be easy in this place to open into the rectum.

Another danger, especially in abscesses between the two layers of the lateral ligament, might easily arise from the rupture of the large uterine vessels running in the wall of the sac. It would be exceedingly difficult, and I should say next to impossible, under such circumstances, to secure and ligate these vessels, the point of ligation being so high up, the working space so small, and the tissues so immovable.

All those objections and dangers we do not encounter in laparotomy. We can see distinctly, and recognize with our own eyes, every particle of tissue we have to divide; the large uterine vessels, if divided, can easily be taken up and ligated. There is no risk of having any communication between the abscess and the peritoneal cavity, which we cannot either close up or drain.

If the laparotomy lasts longer, and gives more technical work to the surgeon, it seems to me that these objections are fully balanced by the advantage of not being obliged to operate in the dark, of not having to battle with enemies that we cannot see, and consequently cannot guard against.

But these are not the only advantages of laparotomy, as compared with the vaginal operation. The free access to the whole interior of the abscess cavity has also to be taken into account. By laparotomy, the abscess is laid open to about the same extent as a tubercular peri-articular abscess. We can examine the whole interior of such a cavity, and scrape off, or remove by other means, whatever objectionable material we may find, cheesy matter, tuberculous tissue, fungoid granulations—since we can see clearly every place where the in-

strument is applied, without any danger of going through the abscess wall into any surrounding cavity or organ.

It is more than possible that this free access to the abscess wall has something to do with the speedy recovery subsequent to laparotomy, as compared with the vaginal operation.*

But, of course, there will always be connected with laparotomy the inherited dread of opening that ominous peritoneal cavity. Modern surgery, however, is making steady progress in diminishing these dangers. Thus, the dread, as well as the safety of the patient, will, to a great extent, rest in, or depend upon, the care and skill of the operator.

PROFESSOR W. H. BYFORD: I do not wish to comment upon the contents of the paper further than to express myself in reference to the mode of operating adopted in consultation with the gentlemen mentioned. A large number of pelvic abscesses can be managed through the rectum with more facility and safety, than any other medium of approach to the deep-seated portions of the pelvic cavity. I do not know whether there are any cases wholly situated in the pelvic cavity, but that can be reached, opened and evacuated through the rectum. It may not always be the most eligible direction to approach collections of pus. In instances in which the pus is making its way toward the vagina, and fluctuation can be felt through the vaginal walls, it ought to be evacuated through that canal; but when the point of discharge is not thus indicated the exploration is most easily made through the rectum; and all chronic cases that have already commenced to discharge into the rectum can and ought to be treated from the cavity of that viscus. I would make no exception, however high the opening might be, so it was within the pelvic cavity. By proper preparation the whole length of the rectum can be reached

* Lawson Tait, *op. cit.*

from the sphincter to the promontory of the sacrum, and from any part of it the pus evacuated; the pyogenic cavity explored and drainage and irrigation safely and securely accomplished.

I believe the dangers of this mode of operating to be incomparably less than by abdominal section; and the other results of the operation—such as drainage and disinfection—more complete.

To effect the objects mentioned, the sphincter should be stretched to laceration; and until there is no tendency to immediate contractions of the anal opening, and till it can be dilated to the full extent of the rectal cavity. Thus thoroughly opened, the whole extent of the rectum can be explored with great facility and often by means of dilators can be seen, and instruments used under the eye of the operator.

If the pus is to be sought after, palpation with the fingers becomes easy and satisfactory; if it is being evacuated, the orifice seen or felt and such treatment as is desired applied. I very much prefer stretching and tearing for the purpose of increasing the size of the discharging orifice to the use of cutting instruments. The opening will not so readily close and there will not be so much haemorrhage.

In effecting the discharge of the pus, we should remember that the reason why the pyogenic cavity is at no time wholly obliterated is because there are irregular loculi or pockets so situated that they do not empty themselves. The opening should therefore be made large; the parts torn by the fingers until this inferior margin of the opening is as far below the main body of the cavity as practicable. With the fingers the interior bands and partitions should be completely broken down and the interior of the cavity rendered as nearly symmetrical as possible. This will enable the whole of the contents of the cavity to escape by means of gravity, and the fluids

used in irrigation find their way out without difficulty. In addition to this shaping of the cavity, the large granulations—generally so abundant—should be scraped away by the fingers or by a dull curette, thus freshening up the lining membrane of the pyogenic cavity and converting it from a state of indolent ulceration to one disposed to heal. This process of curetting also produces a change in the capillary circulation that makes nutritive processes more salutary. Often in very indolent cases the sphincter will recover contractile power to such a degree as to require one or more repetitions of the operation. The same thing may be said of the margin of the orifice in the intestine. We will be obliged to enlarge it and treat the cavity as before.

In the case narrated in the paper, the action of the sulphate of copper seemed most useful and contributed the last influence necessary to the cure.

I have said nothing about the more common items of treatment, such as irrigation, disinfection and stimulation. My intention is to show the facility with which, in many instances, these purulent collections can be reached and treated by dilating and distending the rectum and the comparative safety of such proceedings.

PROFESSOR E. C. DUDLEY: The experience of Dr. Byford and others in the treatment of pelvic abscess by this operation must be considered as proving the great value of the operation in cases in which the abscess can be easily approached and thoroughly drained by dilatation of a sinus between the abscess-cavity and the rectum. It would, however, appear on general principles, that sufficiently free and long-continued drainage would in many cases be almost unattainable and that an abscess-cavity left thus to heal must often be the starting point of sinuses formed by the uncontrolled burrowing of pus

in many directions. The almost inevitable invasion of the abscess-cavity by fecal matter is clearly a serious factor in connection with the history of these cases. The great mortality from pelvic abscesses opening spontaneously into the bowel demonstrates the inability of nature to provide for adequate drainage. Whatever question, therefore, we may raise relative to the advanced position of Dr. Wm. H. Byford, who, if practicable, would prefer to open a pelvic abscess through the rectum—even in those cases in which nature has not anticipated him—there can be no question about the propriety of enlarging and rendering more effective an opening already formed. I regret that the essayist has marred a most admirable contribution by the sweeping statement that in all cases in which drainage has been spontaneously established through the rectum Lawson Tait's operation is contra-indicated. Nor can I imagine from what premises he has formed the conclusion that Tait's operation prevents closure of the sinus between the abscess-cavity and the rectum. The question naturally arises whether Tait's operation might not in such cases fulfil a well recognized surgical indication by establishing a free counter-opening for an abscess which otherwise might refuse to close on account of imperfect drainage and on account of its forming a blind sac for the retention of fecal matter. To a larger number of recognized authorities, who deem an opening into the rectum, whether produced by nature or by art, a grave misfortune, the query would naturally arise whether such an opening ought not to be supplemented by a counter-opening, which would bring the draining and cleansing of the abscess-cavity within the easy and absolute control of the surgeon. Furthermore, in view of the decided mortality which attends the spontaneous

opening of pelvic abscesses into the rectum, and in view of the almost uniformly successful results recorded in the statistics of Tait's operation already published by Mr. Tait and others, and in view of a very generally accepted rule that the operator in opening a pelvic abscess should strive to keep out of the rectum, I don't think a statement that the rectum is to be preferred as the site of the primary operation ought to go on the records of this society unchallenged.

PROFESSOR J. T. JELKS (present by invitation) thought a great mistake was made in waiting too long before operating in cases of chronic pelvic abscess.

DR. PHILIP ADOLPHUS thought the paper was beyond the pale of criticism. When the general symptoms indicated a collection of pus, the cavity should be searched for. If a cavity containing serum was found, an operation was contraindicated. If the cavity contained pus, it should be evacuated.

In closing the discussion, DR. H. T. BYFORD objected to the quotation of Lawson Tait's statistical triumphs in this connection. In the last edition of Tait's *Diseases of the Ovaries*, abdominal section is recommended for those pelvic abscesses only that cannot be successfully evacuated from below. They are generally such as are situated high up, and do not point early in the vagina or rectum, or they are suppurating haematoceles.

The statement that the recto-abdominal fistula, left after abdominal section for a pelvic abscess that has already discharged into the rectum, would heal readily, like any artificial anus, is not borne out by facts. Fistulæ connecting the rectum with the external air have seldom healed, when left

to themselves, before a long period of time had elapsed. Operative measures cannot (in these cases) be resorted to on account of the length, situation and relations of the fistulous track.

W. W. JAGGARD, M.D.,
Editor.

2330 Indiana Avenue,
25th Jan., 1886.

CHICAGO MEDICAL SOCIETY.

Stated Meeting January 4th, 1886.—The President, C. T. PARKES, M. D., in the chair.

The first paper read was entitled *The Effects of Cocaine on the Central Nervous System*, by PROFESSOR D. R. BROWER.

He said we have recovered from the primary effects of the brilliant discovery of Dr. Carl Koller, that sixteen months ago electrified the medical world, and we can now reason together calmly and dispassionately about this powerful therapeutic agent.

He said he had been using in private and hospital practice preparation of the coca leaf for about six years, and for about one year past the alkaloid cocaine, and had reached certain conclusions as to its beneficial and its baneful effects on the central nervous system, that he proposed to present for discussion in his paper. He said beneficial and baneful effects, for it is as powerful for evil as it is for good.

First. *Its Effect upon the Brain.*—In small doses, that is, three or four drachms of the infusion, or one-half to one grain of the alkaloid, it is the most certain and agreeable of all cerebral stimulants. It increases the frequency of the pulse and respiration, and elevates the body temperature. It

gives a sense of well-being, a freedom from care, and a pleasant mental exaltation. The first effect of the drug is upon the cerebrum, then upon the medulla oblongata, the sense of mental exhilaration preceding the stimulation of respiration and circulation. In small doses it also stimulates the spinal cord, producing a desire for muscular activity, and increasing activity of reflexes.

The effect upon the spinal cord, according to the experiments of Dr. Alexander Bennet,* are due entirely to its effects upon the posterior column of the spinal cord; an observation that may make the drug useful in locomotor ataxia. He stated that he is now making clinical investigation in this direction.

This increased activity of the central nervous system is usually followed by a quiet, composed, self-satisfied condition of the mind and body that eventuate in sleep. These agreeable effects are accompanied with loss of appetite, frequently with nausea, constipation and diminished activity of the kidneys, of the sexual functions, and of the skin. In large doses, two to ten grains of the alkaloid, there are produced tinnitus aurium, photophobia, illusions, hallucinations, great loquacity, and a marked tendency of the mind to exaggeration and misrepresentation. If continued for some time this dose produces perversion of the affections, a disturbance of the moral emotions, a tendency to quarrel with friends and former associates, and to form alliances with persons formerly regarded as inferiors.

This state of the nervous system may become very like delirium tremens, with the same kind of muscular tremor and the same kind of horrible hallucinations. During this time the loss of appetite and diminished activity of assimilation re-

*British Medical Journal, April 18, 1874.

sult in extreme pallor of the face, dryness of the skin, extreme constipation, very much diminished urinary excretion, loss of sexual function, and great emaciation.

Second. *Cocaine in the Alcohol and Opium Inebrieties.*—Much has been written upon the use of this drug in efforts to cure this form of nerve mal-nutrition. Louis Baur, M. D.,* in an admirable article details his experience with it in a case of alcohol inebriety. He began with one-fifth of a grain, which the patient soon increased to ten grains by hypodermic injection, with the same disastrous result upon the nervous system as has been mentioned; but he expresses the opinion that cocaine inebriety was less objectionable than the alcoholic.

Dr. Erlenmeyer† gave it, in various doses, in 236 cases of opium inebriety, and expresses sentiments that entirely agree with PROFESSOR BROWER'S. He says that while cocaine does modify and mitigate the phenomena of opium-abstinence, its effect is only transient and of brief duration; he regards it of trifling value as a substitute for morphine.

Dr. J. T. Whittaker‡ reports, in an elaborate paper, the results from its hypodermic use in two cases of opium-inebriety that were satisfactory. Dr. Palmer, of Louisville, Ky., who was one of the first to advise its use in such cases, continues to be an enthusiastic advocate of the drug.

PROFESSOR BROWER'S experience is against its use in either of these inebrieties; it undoubtedly makes the withdrawal of either of these agents much easier for the patient, because its effects are so similar to opium and alcohol that he scarcely feels the need of either; but you place within his reach an agent much more rapidly disastrous and destructive to the

* Weekly Medical Review, Vol. 1, No. 12.

† Centralblatt fuer Nervenheilkund, July, 1885.

‡ Medical and Surgical Reporter, Aug. 15, 1885.

nutrition of the cerebral convolutions; an agent that will soon sink him to a degradation much lower than is possible with either of the others.

Third. *Cocaine in Melancholia*.—The best results yet obtained from the administration of the drug have been in conditions of mental depression. Dr. Jerome K. Bauduy,* in a valuable paper read before the American Neurological Society, June 17, 1885, relates a very extensive experience with the drug in melancholia. His method was to inject one grain of the muriate of cocaine, and he frequently witnessed the morose, silent, taciturn patient, a prey to the most profound grief or sadness, recover his normal self, begin to talk about his case and wonder how he could ever have experienced such gloomy ideas. He reports one case of suicidal melancholia which recovered in less than one month, and to whom he only gave five injections of cocaine. Dr. Alex. B. Shaw,† in an able paper on the uses of the drug, speaks with the same degree of positiveness of its value in the insanities with depression.

PROFESSOR BROWER's own experience with cocaine in this form of insanity is in accord with Drs. Bauduy and Shaw. Although the bad effects of the drug upon the digestive and assimilative processes, and upon the secretions, have frequently disappointed him in its use. He has observed his valuable suggestion of giving the drug several hours before eating, in order to avoid the anorexia and nausea, but even with this precaution he has frequently found it impossible, while using it, to give that abundance of food, systematic feeding, which, after all, is the most valuable therapeutic measure in the relief of melancholia.

* New York Medical Journal, Sept. 26, 1885.

† The Weekly Medical Review, Vol. XII., No. 17.

Then again the excretory organs are often at fault; indeed, often the foundation of this form of insanity, the mal-nutrition of the brain being due to the accumulation in the blood of the waste product of tissue metamorphosis. In such cases the further depression added to those vital necessities by cocaine, must more than counteract the beneficial effects of cerebral stimulation. In such cases alteratives and stomachic tonics added to the treatment may make it successful.

He recalled two cases of profound melancholia. One a physician, aged 45, from a neighboring town of this State; an uncomplicated case, the result of excessive professional work in a large country practice. He received the cocaine in one grain doses three times a day, with pil. hydrargyri, aloes and strychnia. His recovery was rapid, and has continued for four months. The other case was that of a woman aged 48, from Indiana, laboring under melancholia, that seemed to have its origin in the fret and worry induced by a tumor of one of the mammary glands. Under this combined treatment recovered about as rapidly as the case detailed by Dr. Bauduy. In both these cases the drug was administered in pill form, and probably because of its combination did not interfere with the free use of egg-nog and other concentrated food in large quantities.

He has now under treatment a case of melancholia in which he is using the drug with the atomizer, using about four grains a day, on the nasal mucous membrane. The stimulating effects on the brain are manifested in a very few minutes after it is used. He is of the opinion that cocaine is the most valuable recent addition made to the therapeutics of melancholia, especially if its bad effects are guarded against in the way suggested.

Fourth. *Neurasthenia*.—Cocaine is of value in the treatment of this tedious and perplexing derangement of the nervous system. Dr. J. Leonard Corning,* in his scientific review of the cerebral form of this disease, calls it "the remedy *par excellence*." Dr. William Oliver Moore,† in a very valuable paper on the physiological and therapeutical effects of coca and its alkaloid, gives his personal experience and the observations of others as to the value of the drug in all depressed conditions of the nerve centres, as well as its effects upon himself in various doses.

PROFESSOR BROWER'S experience coincides with the testimony of these writers, but he observes the same care in sustaining the digestive function and stimulating the eliminations as stated before. Cocaine, as mentioned in the beginning of this paper, is as powerful for evil as for good, and it requires no special prophetic gift to say that more disastrous results will be experienced by the laity from its indiscriminate use, than have been known from either opium or alcohol. Indeed, its action upon some persons in moderate doses is alarming. Dr. G. W. Kennicott‡ relates a case of poisoning from three and a third grains of the drug applied to the nasal mucous membrane, in the case of a female aged twenty-five, who had been using it for hay-fever. When he arrived she was in an alarmingly comatose condition, from which she recovered in about three hours, under the liberal use of brandy, ammonia and digitalis, with heat to her extremities and epigastrium.

DR. J. C. SPEAR,§ U. S. Navy, publishes a case of alarming coma closely simulating opium-poisoning, in a private, U. S.

* Brain Exhaustion.

† Quarterly Bulletin, New York Post Graduate School, Vol. I., No. 1.

‡ Chicago Medical Journal and Examiner, Oct., 1885.

§ The Medical Record, Nov. 14, 1885.

M. C., aged twenty-nine, the result of the hypodermic use of ten grains in divided doses, extending over about twelve hours. The case was supposed to be opium-poisoning, and was treated with atropia, coffee, and flagellation, and in about nine hours he recovered from the immediate effect of the poison. Dr. T. H. Burchard* gives an account of a case in which the hypodermic injection of four-fifths of a grain produced a sudden and complete loss of consciousness, and in which respiration stopped, and the radial pulse was scarcely perceptible. Artificial respiration, hypodermic injection of one-twelfth grain of atropia, and sinapsisms to heart and extremities, relieved the patient. Fifteen minutes after the prostration the pulse was forty-eight and feeble, the respiration seven or eight, and the pupils contracted. Unconsciousness continued about twenty minutes.

DR. MERRIAM† relates the case of a gentleman who had been taking cocaine for four months for sick headache, beginning with about two grains a day, and gradually increasing till he was taking from ten to fifteen grains daily. He was very weak, with a pulse of 100, and his mind wandering somewhat as in delirium tremens. Drs. Bauduy and Shaw, in their papers already mentioned, dwell especially upon the dangers of the continued use of the drug in large doses. Professor Brower's experience is in accord with these several observers. Several cases of the poisonous effects of the drug have been under his treatment during the past six months, and he called the attention of the Society to two of these cases, both physicians:

First. The case of Dr. W., aged about thirty, of excellent

* The Medical Record, Dec. 5, 1885.

† Quoted by the Medical Record, Nov. 28, 1885, from Ohio Medical Journal.

physique, of neurotic tendency by inheritance, who began the use of the hydrochlorate of cocaine upon the nasal and pharyngeal mucous membranes for hay-fever. He gradually increased the dose to five grains taken in one dose in the evening, when his attack of hay-fever was usually most distressing. This dose gave almost immediate relief from the hay-fever, and gave a sense of mental stimulation very like champagne. He was almost at once seized with a desire for brain-work, and would pass the greater part of the night reading and writing on professional topics, experiencing a keenness of perception and a mental vigor greater than normal. He describes his sensations during the period of activity of the drug as exceedingly delightful. Towards morning he would fall asleep, and on the next day he would have no appetite and but little desire for work, the excessive stimulation having been followed by a corresponding depression of the vital forces.

He soon found a very irregular and rapid action of the heart, and passed by rapid stages to a condition of deplorable neurasthenia, from which he is slowly recovering. He had the same derangement of digestion, assimilation and elimination that have been already mentioned. He had but little desire for food, a thickly coated tongue, a feeble digestion, considerable emaciation, urine scanty, and much of the time loaded with uric acid and urates, with dyspnœa and the irregularity of heart action heretofore mentioned. The stools for some time were chalky, skin dry and pallid, pupils dilated, reflexes, especially the patellar tendon, much increased, and muscular powers much diminished.

He continued the use of the drug about ten days, and stopped it because he feared its enslaving power. This profound depression of the nervous system followed immediately upon its stoppage. The agents used to overcome this

neurasthenia were an abundance of easily digested food, mild alteratives, moderate alcoholics, strychnia in small doses, cinchona, and the compound syrup of hypophosphites. As stated, the depression is gradually passing away, but the ten days' use of cocaine has incapacitated him for four months from the practice of his profession, and the probability is that at least three months more will be required to complete his restoration.

Second. The case of Dr. B., aged thirty-five, a man of decidedly neuropathic temperament, a hard-working, conscientious, and skillful physician, in the enjoyment of a fair but very laborious practice, with an excellent family history. Three years ago, with Professor Brower's assistance, he discontinued the use of opium, which he had been using excessively. He began the use of cocaine last May in one-eighth grain doses, having been led to believe it to be a harmless stimulant, and being at the time much run down by excessive professional work. It gave him such a sense of well-being as he had never experienced from any agent before, the sense of complete repose and self-satisfaction it produced being very much more marked and agreeable than that derived from opium. He gradually increased the dose until he consumed about fifteen grains a day by hypodermic injection. The large doses soon began to produce mental disturbance; he became irritable, quarrelsome, impetuous, and considered himself to be possessed of a mission, and that was to revolutionize the medical practice, claiming to be able to cure all diseases by the potency of cocaine. He gave it indiscriminately to all his patients. He gave it to obstetric cases and to syphilitic cases. He gave it to his wife, his three children and his mother. He was formerly a modest

man of science; he became bold and unscientific in his method, went about engaging in lawsuits, carrying a pistol and frequently brandishing it in public places, threatening vengeance on all who dared to doubt the correctness of his various extravagant statements, a perfect terror in his neighborhood. He had been a very devout member of the Roman Catholic Church, but the priest of the church could now do nothing toward restraining his wild impetuosity. He neglected his practice, and by his manner alienated those whom he did not neglect, so that very soon he lost it. Piece by piece his horse, his buggy, and his furniture disappeared, until his family was reduced to poverty. Repeated efforts to persuade him to stop the use of the drug were unsuccessful; indeed, simply resulted in making Professor Brower the recipient of his wildest denunciations and of his severest threatenings. Several physicians and druggists who made attempts to restrain him met with an equally positive rebuff. The same general deterioration as before noticed, was manifest in his case, extreme pallor and dryness of the skin, great emaciation, loss of appetite and no desire for sleep, so that for at least one week he did not assume the recumbent position.

He continued to go from bad to worse until his friends thought it best to restrain him. In pursuance of this object Professors F. L. Wadsworth and Brower appeared before the County Court and advised his removal to the Washingtonian Home. Here the cocaine was gradually withdrawn, but his mental extravagance continued unabated. He left this institution clandestinely, and is now supposed to be in Canada.

To sum up, he said:

1. Cocaine in small or moderate doses is a cerebral stimulant, but produces derangement of the digestive and assimilative functions, and diminishes the elimination of waste.
2. The use of cocaine in the alcoholic and opium inebriates is not satisfactory; while it is a more or less perfect substitute, yet its use is attended with greater danger than alcohol or opium.
3. The use of cocaine in mental depression, if we carefully guard against the depressing effects of the drug upon digestion and assimilation, will often give better results than any drug hitherto used.
4. The use of cocaine in neurasthenia is a valuable addition to the treatment.
5. The drug, if administered in large doses persistently, causes a very marked deterioration of the central nervous system, producing a profound cerebral neurasthenia, and may produce such a mal-nutrition of the cerebrum as to develop insanity.
6. Cocaine, occasionally, in doses heretofore regarded as small, produces alarming depression of the central nervous system.

PROFESSOR E. L. HOLMES opened the discussion by saying that the South American Indians eat large quantities of the coca leaf, without injury.

PROFESSOR BROWER said that in the early history of Peru the Catholic Church authorities sought to stop the use of coca in that way because of its deleterious effects upon the people. But it was impossible to do it, they used it clandestinely, and the prohibition was withdrawn. He said that used in that way the result was a similar condition of mental deterioration as that mentioned in the paper; while these people were capa-

ble, under its influence, of performing muscular efforts in climbing the hills and mountains of that country, they were a puny, sallow, emaciated people, with intellectual capacity very little above the brute creation.

PROFESSOR HOLMES said that his experience had been wholly in connection with local applications on the eye. He had seen one case, in which he had placed cocaine in both eyes for an operation, in which it was followed by considerable depression and nausea through the night, but no alarming symptoms. He had twice used it in his office for strabismus, placing a not unusual quantity in the eye, where the patient felt sick and almost slipped out of the chair, and the operation was performed with the patient lying on the floor, but he suspected it to be a fit of fainting at the sight of the instruments. He had found from experience that very minute doses will be absorbed, but had never seen the slightest influence from the amount which is usually given in the eye. It is exceedingly satisfactory in performing operations, and in removing little motes and pieces of iron or steel lodged in the cornea.

PROFESSOR C. W. EARLE said it appeared to him that when Dr. B. was in the Washingtonian Home he got along with a very small amount of the drug, very much less than he had anticipated it would be possible for him to get along with. That Dr. B. informed him that he had been in the habit of taking from 15 to 18 grains a day. After he went into the Home, the first three days he took less than three grains, and after that time did not take any. He regained his appetite very well, and appeared to improve in every respect up to the time that his wife and brother or brother-in-law came from Canada to visit him, then he was seized with an idea that he must go home, or at least to Canada, and from that time he was uneasy and did not do well. Professor Earle said that it seemed to

him that there had been more said in regard to the use of cocaine than there was any use in saying. While Dr. B. was at the Home he was not unlike an ordinary opium-eater. The depression which followed withdrawal was somewhat similar, although there were none of the symptoms of dizziness, or nausea and sneezing, which are usually present after the withdrawal of opium.

PROFESSOR SARAH HACKETT STEVENSON said that she was surprised at the deleterious effects found by Dr. Brower from the use of cocaine in hay-fever. She had had a number of cases in which it was used, without any of the symptoms mentioned in the paper. She used a 4 per cent. solution, applying with a camel's-hair brush, or simply by snuffing. Professor Stevenson said she had used cocaine a great deal hypodermically in surgical operations with good effect so far as anæsthesia was concerned.

DR. W. F. COLEMAN said there are two lines of practice in treating the narcotic habit: to cut a man off from his drug completely, at once, or to taper him off. He believed in depriving him of the drug at once. If he found a man being poisoned he would not add another dose, but stop it immediately. He knew nothing practically of the internal use of cocaine, but was surprised at the grave effect mentioned by Dr. Brower. Cohn-Mueller asserts that he kills a frog with four-tenths of a grain, but to human patients he gave indiscriminately 5 grains and it produced no perceptible ill-effect. Locally, Dr. Coleman had had some experience with the drug, and there is this point about its immediate effect, it relieves pain in acute otitis, but it is a grave question whether it does not prolong the case, and while it relieves pain it is doubtful if it is better than hot water or other remedies. In its application to the eye there was not this objection, it produces anæ-

thesia and allows almost any operation to be performed without pain; it does not prolong congestion, and gives permanent relief.

PROFESSOR D. W. GRAHAM said that he noticed Dr. Brower quoted a case reported by Dr. Burchard in the *Medical Record*, in which a patient sustained loss of consciousness and stoppage of the pulse after an injection of four-fifths of a grain of cocaine. Professor Graham doubted very much whether the bad effects were due to cocaine; we get the same effect in many patients by injecting water, or by showing them the hypodermic syringe, and he thought it probable that it was simply a fainting-fit. There was nothing in the report that would lead to any other conclusion except that Dr. Burchard says it was the result of the injection of cocaine. Professor Graham doubted the conclusion and thought it unreliable.

DR. F. M. WELLER said he had had some experience in the use both of cocaine and the fluid extract of coca. He had never used such large doses as those mentioned, but had seen that very large doses of the drug would produce unpleasant symptoms about the head, dull heavy headache, something like doses of other narcotics. Hypodermically he had used as much as five grains at one time without any unpleasant effects whatever. He was inclined to think that the real difficulty in some of these cases was that some other circumstance was overlooked. It seemed to him that some idiosyncrasy might exist that would make one peculiarly susceptible to this kind of narcotic, and it would hardly be reasonable to charge it all to cocaine. His reading of the history of the use of the drug in South America, where it originated, led him to think that it could be used a long time without injury. He thought one lesson is to be learned from the paper, viz., that no drug should be continued beyond the time of its necessity. That principle

laid down and strictly adhered to, the patient would never suffer from the deleterious use of any drug.

PROFESSOR BROWER in closing the discussion, said that Dr. B. bought cocaine wherever he could get it, and he did not know what preparation he used. The other physician mentioned in the paper used Merck's cocaine altogether. He used it for hay-fever and took five grains by inhalation every day for ten days. Professor Brower said that he did not suppose that such disastrous effects as occurred in these cases and others, would result unless there was some weakness of the nervous system; he thought possibly a person perfectly robust and with a well-governed nervous organization could take cocaine with impunity, but a person with a nervous temperament could not use this drug continuously without some such results following. He said his plan of treatment was that of gradual withdrawal, as well with opium and chloral as with cocaine. This plan could be followed with less inconvenience to the patient. He said he was well aware that cocaine was one of the most valuable additions to the therapeutics of hay-fever, it had been administered in perhaps thousands of cases in Chicago, and with few disastrous effects. As to the case reported by Dr. Burchard, it was reported as a case resulting from hypodermic injection, and it struck Professor Brower as being a reasonable result in a very susceptible individual, but it might be that the man had a fainting-fit. The case was reported in the *Medical Record* of Dec. 5, 1885; it impressed Professor Brower as being undoubtedly a case of cocaine-poisoning.

After the reading of the paper entitled "Opium Smoking," by Professor C. W. Earle, and one entitled "Hygienic Clothing" by Dr. L. L. McArthur, on which there was no discussion, the society adjourned.

BOOK REVIEWS.

CONSUMPTION: ITS NATURE, CAUSES, PREVENTION AND CURE.

By J. M. W. KITCHEN, M. D., *Assistant Physician to the Bellevue Chest Class (O. D. Dept.); Assistant Surgeon to the Metropolitan Throat Hospital; late instructor in Diseases of the Nose and Throat at the New York Post-Graduate Medical School; Author of "Students' Manual of Diseases of the Nose and Throat;" "Catarrh, Sore-Throat, Hoarseness," etc.* G. P. PUTNAM'S SONS, *New York, 1885.*

The book begins with some general remarks on consumption, followed by a sketch of the anatomy and physiology of the respiratory organs and their hygiene. Then comes an account of the different forms of consumption; their nature and symptoms; the physical signs; the possibilities of cure, and the causes of the disease. Then follows a discussion of the principles of treatment, and a chapter on the relations of man's surrounding conditions to phthisis, including climate—the atmosphere,—heat and cold,—moisture, light,—locality and soils,—food,—physical culture,—hereditary transmission,—occupation,—dress,—social habits and surroundings,—individual habits,—ventilation and heating. The succeeding chapters are on the office of medicine in the cure of phthisis and the political duty of the people in regard to the disease, after which the book closes with some general remarks.

This extended, though not very systematic plan, covers ground enough for a large treatise instead of a duodecimo of 223 pages. The book is not even compactly written. It is in the highest degree sketchy, and many things that we would

naturally expect here are either left out entirely or are passed over so briefly as to be of little value.

There are some sensible, though self-evident remarks on the hygiene of those having phthisis, or who are predisposed to it.

The chapter on treatment is too general for the student and too commonplace for the physician.

The position of the profession with respect to the tubercle bacillus is inaccurately, not to say, unfairly stated. One familiar with the history of its investigation would certainly have written differently.

The part on anatomy and physiology of the lungs might have been as well written by a newspaper reporter.

The author writes fluently, so much so that his pen often outruns his thought.

The book contains nothing new, and is not better arranged or expressed than has often been done before. The reason for its existence, therefore, and why any one should be expected to read it, are mysteries.

L. C.

A PRACTICAL TREATISE ON URINARY AND RENAL DISEASES.
Including Urinary Deposits, Illustrated by numerous Cases and Engravings. By WILLIAM ROBERTS, M. D., F. R. S., ETC.
Assisted by ROBERT MAGUIRE, M. D., London. Fourth edition.
Philadelphia: LEA, BROTHERS & CO.

Among the numerous works on renal and urinary diseases now in circulation, perhaps Dr. Roberts' has the best claim to be regarded as "standard." The present edition shows evidence of having been carefully revised, and appears to be well up with the times. The article on "Micro-organisms in the Urine" has been expanded and improved, although it is by no means complete. The chapter on "Albuminuria" is an excellent *exposé* of the present doctrines regarding the efficient

causes of albumen in the urine. In this chapter we are glad to notice that something like order is at last evolving out of the chaos of professional opinion which has so long prevailed concerning albuminuria. The author amplifies and insists upon the clinical value of his "minimetric method" of testing for albumen in the urine. "Part II." treats of "Diseases of which the chief characteristic is an alteration of the urine," and includes "Diabetes Insipidus," "Diabetes Mellitus," "Gravel and Calculus" and "Chylous Urine." The section on the treatment of "Diabetes Mellitus" is very incomplete and unsatisfactory. The author's experience with strychnia and codeia is such as to excite the suspicion that neither of these remedies has received a fair and full trial at his hands. "Part III." treats of "Organic Diseases of the Kidneys," commencing with "Congestion of the Kidneys" and ending with "Anomalies of Position, Form and Number of the Kidneys." It is this portion of the work which will more particularly interest the practical physician. It is essentially a clinical work, and as such possesses a peculiar value to the busy practitioner.

We do not like the author's clumsy classification of Bright's diseases, but on the other hand the time for an irrevocable classification of renal diseases has not yet come. Again, it seems to us that so experienced a clinician as Dr. Roberts should contribute more liberally to the field of therapeutics, but then we remember that the treatment of renal affections is still contradictory and unsatisfactory to a degree almost discouraging. These faults can therefore be forgiven. "Suppuration of the Kidney," "Pyelitis and Pyonephrosis," and the consequences arising therefrom, are treated evidently by "one who knows." We especially commend the chapter on "Entozoa in the Kidneys," as perhaps the best in any one of the common text-books. Finally, in spite of the faults we have

mentioned, and the faults we have *not* mentioned, Dr. Roberts' is an eminently useful and practical book, and we congratulate the author on its deserved popularity with the profession.

I. N. D.

NEWS ITEMS.

A Sanitary Convention will be held at Howell, Michigan, under the auspices of the State Board of Health, on Wednesday and Thursday, March 3 and 4, 1886.

There will be sessions the first day at 2:00 P. M. and 7:30 P. M.; on the second day at 9:30 A. M., 2 P. M. and 7:30 P. M., standard time.

At each session of the Convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

The President of the Convention will be the Rev. M. H. Pettit.

VICE PRESIDENTS: Hon. William McPherson, Jr., Howell; L. S. Montague, Esq., Howell; R. H. Person, Esq., Howell; Hon. Jay Corson, Howell; Hon. Neil O'Hern, Charles G. Jewett, Judge Arthur E. Cole, Dr. W. L. Wells, Dr. Robert B. Bell, Hon. E. B. Winans, Hon. William Ball, Hamburg; E. J. Hardy, Esq., Oceola; Fred. H. Warren, Esq., Fowlerville; Hon. George Coleman, Marion; Dr. C. W. Haze, Pinckney; Dr. J. J. Boyd, Hartland; Dr. W. H. Erwin, Oak Grove; Dr. W. J. McHench, Brighton.—Secretary, Dr. J. A. Wessinger.

Invitation is especially extended to health-officers to be present and take part in the discussions.

The objects of the Convention are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness and death, and the improvement of the conditions of living.

ADDRESSES AND SUBJECTS TO BE PRESENTED AND DISCUSSED.

Welcoming address by Hon. Jay Corson, Mayor of Howell.

An address by the President of the Convention, Rev. M. H. Pettit.

Among the subjects which it is expected will be presented and discussed are the following:—

1. The sanitary condition and needs of school buildings and grounds, and of other public buildings and grounds in Howell.
2. The general subject of water-supply, and the present condition of the water-supply in Howell, the depth of wells and the details of their surroundings.
3. The disposal of slops, garbage, refuse, etc.
4. The prevention of communicable diseases.
5. Ventilation.
6. The drainage and sewerage of Howell.

The papers are expected to be original contributions, which when read are to be considered the property of the Convention, and to be left with the Secretary. Programmes will be issued before the Convention.

The Committee from the State Board of Health consists of J. H. Kellogg, M. D., Battle Creek, and Henry B. Baker, M. D., Lansing.

DR. J. A. WESSINGER, *Secretary*,
Howell, Michigan.